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PART A
IONOSPHERIC DATA

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U. S. DEPARTMENT OF COMMERCE
NATIONAL BUREAU OF STANDARDS
CENTRAL RADIO PROPAGATION LABORATORY
BOULDER, COLORADO

IONOSPHERIC DATA

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SYMBOLS, TERMINOLOGY, CONVENTIONS

Beginning with data reported for January 1952, the symbols, terminology, and conventions for the determination of median values used in this report (CRPL-F series) conform as far as practicable to those adopted at the Sixth Meeting of the International Radio Consultative Committee (C.C.I.R.) in Geneva, 1951. Excerpts concerning symbols and terminology from Document No. 626-E of this Meeting are given on pages 2-7 of the report CRPL-F89, "Ionospheric Data," issued January 1952. Reprints of these pages are available upon request.

Beginning with data for January 1945, median values are published wherever possible. Where averages are reported, they are, at any hour, the average for all the days during the month for which numerical data exist.

The following conventions are used in determining the medians for hours when no measured values are given because of equipment limitations and ionospheric irregularities. Symbols used are those given in Document No. 626-E referred to above, plus an additional symbol, R: "Scaling of characteristic is influenced or prevented by absorption in the neighborhood of the critical frequency," (May 1955).

a. For all ionospheric characteristics:

Values missing because of A, C, F, L, M, N, Q, R, S, or T are omitted from the median count.

b. For critical frequencies and virtual heights:

Values of foF2 (and foE near sunrise and sunset) missing because of E are counted as equal to or less than the lower limit of the recorder. Values of h'F2 (and h'E near sunrise and sunset) missing for this reason are counted usually as equal to or greater than the median. Other characteristics missing because of E are omitted from the median count.

Values missing because of G are counted:

1. For foF2, as equal to or less than foF1.
2. For h'F2, as equal to or greater than the median.

The symbol W is included in the median count only when it replaces a height characteristic; the symbol D, only when it replaces a frequency characteristic.

Values missing for any other reason are omitted from the median count.

c. For MUF factor (M-factors):

Values missing because of G or W are counted as equal to or less than the median.

Values missing for any other reason are omitted from the median count.

d. For sporadic E (Es):

Values of fEs missing because of E or G (and B when applied to the daytime E region only) are counted as equal to or less than the median foE, or equal to or less than the lower frequency limit of the recorder.

Values of fEs missing for any other reason, and values of h'Es missing for any reason at all are omitted from the median count.

Beginning with data for November 1945, doubtful monthly median values for ionospheric observations at Washington, D. C., are indicated by parentheses, in accordance with the practice already in use for doubtful hourly values. The following are the conventions used to determine whether or not a median value is doubtful:

1. If only four values or less are available, the data are considered insufficient and no median value is computed.

2. For the F2 layer, if only five to nine values are available, the median is considered doubtful. The E and F1 layers are so regular in their characteristics that, as long as there are at least five values, the median is not considered doubtful.

3. For all layers, if more than half of the values used to compute the median are doubtful (either doubtful or interpolated), the median is considered doubtful.

The same conventions are used by the CRPL in computing the medians from tabulations of daily and hourly data for stations other than Washington, beginning with the tables in IRPL-F18.

The tables and graphs of ionospheric data are correct for the values reported to the CRPL, but, because of variations in practice in the interpretation of records and scaling and manner of reporting of values, may at times give an erroneous conception of typical ionospheric characteristics at the station. Some of the errors are due to:

- a. Differences in scaling records when spread echoes are present.
- b. Omission of values when f_oF_2 is less than or equal to f_oF_1 , leading to erroneously high values of monthly averages or median values.
- c. Omission of values when critical frequencies are less than the lower frequency limit of the recorder, also leading to erroneously high values of monthly average or median values.

These effects were discussed on pages 6 and 7 of the previous F-series report IRPL-F5.

Ordinarily, a blank space in the fEs column of a table is the result of the fact that a majority of the readings for the month are below the lower limit of the recorder or less than the corresponding values of f_oE . Blank spaces at the beginning and end of columns of $h'F_1$, f_oF_1 , $h'E$, and f_oE are usually the result of diurnal variation in these characteristics. Complete absence of medians of $h'F_1$ and f_oF_1 is usually the result of seasonal effects.

The dashed-line prediction curves of the graphs of ionospheric data are obtained from the predicted zero-muf contour charts of the CRPL-D series publications. The following points are worthy of note:

- a. Predictions for individual stations used to construct the charts may be more accurate than the values read from the charts since some smoothing of the contours is necessary to allow for the longitude effect within a zone. Thus, inasmuch as the predicted contours are for the center of each zone, part of the discrepancy between the predicted and observed values as given in the F series may be caused by the fact that the station is not centrally located within the zone.
- b. The final presentation of the predictions is dependent upon the latest available ionospheric and radio propagation data, as well as upon predicted sunspot number.
- c. There is no indication on the graphs of the relative reliability of the data; it is necessary to consult the tables for such information.

PREDICTED AND OBSERVED SUNSPOT NUMBERS

The following predicted smoothed 12-month running-average Zürich sunspot numbers were used in constructing the contour charts:

Month	Predicted Sunspot Number										
	1956	1955	1954	1953	1952	1951	1950	1949	1948	1947	1946
December		42	11	15	33	53	86	108	114	126	85
November		35	10	16	38	52	87	112	115	124	83
October		31	10	17	43	52	90	114	116	119	81
September		30	8	18	46	54	91	115	117	121	79
August		27	8	18	49	57	96	111	123	122	77
July	95	22	8	20	51	60	101	108	125	116	73
June	89	18	9	21	52	63	103	108	129	112	67
May	77	16	10	22	52	68	102	108	130	109	67
April	68	13	10	24	52	74	101	109	133	107	62
March	60	14	11	27	52	78	103	111	133	105	51
February	53	14	12	29	51	82	103	113	133	90	46
January	48	12	14	30	53	85	105	112	130	88	42

The latest available information follows concerning the corresponding observed Zürich numbers (some of which may be subject to minor change) beginning with the minimum of April 1954.

Observed Sunspot Number

Month	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1954				3	4	4	5	7	8	8	9	12
1955	14	16	19	23	29	35	40					

WORLD - WIDE SOURCES OF IONOSPHERIC DATA

The ionospheric data given here in tables 1 to 60 and figures 1 to 120 were assembled by the Central Radio Propagation Laboratory for analysis and correlation, incidental to CRPL prediction of radio propagation conditions. The data are median values unless otherwise indicated. The following are the sources of the data in this issue:

Republica Argentina, Ministerio de Marina:
Buenos Aires, Argentina

Commonwealth of Australia, Ionospheric Prediction Service of the
Commonwealth Observatory:

Brisbane, Australia
Canberra, Australia
Hobart, Tasmania
Townsville, Australia

Australian Department of Supply and Shipping, Bureau of Mineral
Resources, Geology and Geophysics:
Watheroo, Western Australia

University of Graz:
Graz, Austria

Meteorological Service of the Belgian Congo and Ruanda-Urundi:
Elisabethville, Belgian Congo
Leopoldville, Belgian Congo

British Department of Scientific and Industrial Research, Radio
Research Board:
Falkland Is.
Inverness, Scotland
Port Lockroy
Singapore, British Malaya
Slough, England

Defence Research Board, Canada:
Baker Lake, Canada
Churchill, Canada
Winnipeg, Canada

Radio Wave Research Laboratories, National Taiwan University,
Taipeh, Formosa, China:
Formosa, China

Danish National Committee of URSI:
Godhavn, Greenland

The Royal Netherlands Meteorological Institute:
De Bilt, Holland

Icelandic Post and Telegraph Administration:
Reykjavik, Iceland

Indian Council of Scientific and Industrial Research, Radio Re-
search Committee, New Delhi, India:
Ahmedabad, India (Physical Research Laboratory)
Bombay, India (All India Radio)
Calcutta, India (Institute of Radio Physics and Electronics)
Delhi, India (All India Radio)
Madras, India (All India Radio)
Tiruchy (Tiruchirapalli), India (All India Radio)

Christchurch Geophysical Observatory, New Zealand Department of
Scientific and Industrial Research:
Campbell I.

Norwegian Defence Research Establishment, Kjeller per Lillestrom,
Norway:
Oslo, Norway
Tromso, Norway

Manila Observatory:
Baguio, P. I.

South African Council for Scientific and Industrial Research:
Capetown, Union of South Africa
Johannesburg, Union of South Africa
Nairobi, Kenya (East African Meteorological Department)

Research Laboratory of Electronics, Chalmers University of
Technology, Gothenburg, Sweden:
Kiruna, Sweden

Research Institute of National Defence, Stockholm, Sweden:
Upsala, Sweden

Post, Telephone and Telegraph Administration, Berne, Switzerland:
Schwarzenburg, Switzerland

United States Army Signal Corps:
Ft. Monmouth, New Jersey
Okinawa I.

National Bureau of Standards (Central Radio Propagation Labor-
atory):
Anchorage, Alaska
Fairbanks, Alaska (Geophysical Institute of the University
of Alaska)
Guam I.
Huancayo, Peru (Instituto Geofisico de Huancayo)
Maui, Hawaii
Panama Canal Zone
Point Barrow, Alaska
Puerto Rico, W. I.
San Francisco, California (Stanford University)
Talara, Peru (Instituto Geofisico de Huancayo)
Washington, D. C.

HOURLY IONOSPHERIC DATA AT WASHINGTON, D. C.

The data given in tables 61 through 71 follow the scaling practices given in the report IRPL-C61, "Report of International Radio Propagation Conference," pages 36 to 39, and the median values are determined by the conventions given above under "Symbols, Terminology, Conventions." Beginning with September 1949, the data are taken at Ft. Belvoir, Virginia.

ERRATA

1. F137(A), p. 10, table 17: h'E should read at 07, ---; from 08 through 17, 100. The corresponding curve should be added to fig. 34, p. 37, in the same issue.
2. F137(A), p. 29, fig. 3: Disregard the F2 prediction curve. It is for 80°N.

TABLES OF IONOSPHERIC DATA

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Table 1

Washington, O. C. (38.7°N, 77.1°W)

January 1956

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	280	2.9					<1.6	2.90
01	290	2.9					<1.6	3.00
02	280	3.0					<1.5	3.00
03	250	3.5					<1.2	3.10
04	250	3.2					<1.2	3.10
05	240	3.1					<1.6	3.10
06	250	2.9					<1.6	3.10
07	250	3.4					<1.6	3.20
08	220	6.3			(131)	1.8	2.3	3.50
09	220	7.4	215	---	109	2.4	2.9	3.50
10	240	8.6	210	---	109	2.8	3.5	3.30
11	240	9.7	220	---	109	3.1	3.6	3.30
12	240	9.8	215	---	110	3.1	3.6	3.25
13	250	9.5	210	---	109	3.1	3.1	3.20
14	240	9.4	215	---	109	2.9	3.1	3.20
15	240	9.5	230	---	109	2.7	3.0	3.20
16	230	9.2	230	---	119	2.4	2.5	3.25
17	220	8.0				1.6	<1.7	3.25
18	220	7.8					<1.6	3.25
19	220	6.5					<1.6	3.30
20	220	4.9					<1.6	3.30
21	250	3.5					<1.6	3.15
22	270	3.5					<1.6	3.00
23	270	3.1					<1.7	3.00

Time: 75.0°W.

Sweep: 1.0 Mc to 25.0 Mc in 13.5 seconds.

Table 3

Fairbanks, Alaska (64.9°N, 147.8°W)

December 1955

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	310	(2.2)					4.2	(3.0)
01	(290)	(2.9)					6.0	(3.05)
02	(310)	(2.7)					5.1	(2.85)
03	---	(3.2)					5.5	(2.8)
04	(300)	(3.0)					6.0	(2.8)
05	(320)	(3.2)					4.8	(2.8)
06	300	(2.8)					4.2	2.9
07	(280)	3.0					4.1	2.9
08	270	(3.2)					3.4	3.0
09	240	4.2					<2.4	3.2
10	230	5.9			---	---	2.0	3.3
11	220	6.9			---	---	2.0	3.4
12	220	7.6			---	---	2.0	3.2
13	220	8.4			---	---	1.8	3.3
14	220	7.7			---	---	<1.5	3.3
15	210	6.8						3.3
16	220	5.8						3.3
17	220	4.5						3.4
18	230	3.2						3.4
19	250	2.3					1.7	3.2
20	290	(1.9)			---	---	3.3	(3.0)
21	280	(2.5)			---	---	2.2	3.05
22	300	(1.8)			---	---	3.8	(3.0)
23	300	(1.8)					4.2	(3.0)

Time: 150.0°W.

Sweep: 1.0 Mc to 25.0 Mc in 13.5 seconds.

Table 5

Upsala, Sweden (59.8°N, 17.6°E)

December 1955

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	365	(1.9)					2.9	2.7
01	350	(1.8)					2.8	2.7
02	340	1.8					2.9	2.8
03	335	1.8					2.7	2.8
04	330	1.8					2.9	2.8
05	300	2.0					3.0	2.9
06	290	2.0					3.1	2.9
07	280	2.0					2.6	2.9
08	240	3.7			---	E	2.8	3.0
09	220	5.8	---	---	---	1.6	3.0	3.2
10	220	7.0	---	---	115	1.9	2.5	3.3
11	230	8.3	---	---	115	2.0	2.5	3.3
12	220	8.5	240	(3.1)	120	2.1	2.8	3.3
13	220	8.2	---	---	120	2.0	2.7	3.3
14	220	7.7	---	---	120	1.8	2.4	3.3
15	210	6.7			---	E	2.5	3.3
16	220	5.9			---	E	2.7	3.2
17	225	4.5					2.7	3.2
18	240	3.0						3.1
19	270	2.3					2.1	3.0
20	300	2.0					2.4	2.95
21	300	(1.8)					2.8	2.8
22	345	(1.9)					2.7	(2.7)
23	350	(1.8)					2.9	(2.7)

Time: 15.0°E.

Sweep: 1.4 Mc to 17.0 Mc in 6 minutes, automatic operation.

Table 2

Tromsø, Norway (69.7°N, 19.0°E)

December 1955

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	---	(2.9)					4.1	---
01	---	3.1					3.6	2.7
02	(310)	3.2					3.0	2.7
03	300	3.1					2.9	2.7
04	285	2.8					2.7	2.9
05	275	2.7					2.8	2.9
06	260	2.5					2.7	2.9
07	255	2.2					2.7	3.0
08	250	2.4					2.8	2.9
09	245	3.6			---	---	>1.4	2.9
10	240	4.7			---	---	2.8	3.1
11	240	5.8	---	---	---	---	<2.3	3.2
12	235	6.3	---	---	---	---	<2.1	3.2
13	235	6.1			---	---	<2.0	3.1
14	240	5.5			---	---	<2.4	3.1
15	220	4.8			---	---	2.3	3.1
16	235	3.6					2.8	3.05
17	(240)	2.5					3.1	3.05
18	---	2.1					4.0	(3.0)
19	---	2.4					4.0	(3.05)
20	---	(2.0)					4.0	(2.9)
21	---	---					4.0	---
22	---	---					4.0	---
23	---	---					4.0	---

Time: 15.0°E.

Sweep: 0.7 Mc to 25.0 Mc in 5 minutes, automatic operation.

Table 4

Oslo, Norway (60.0°N, 11.1°E)

December 1955

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	---	1.6					<1.3	(2.65)
01	---	1.7					<1.4	(2.7)
02	(305)	1.7					<1.1	2.7
03	(310)	1.7					<1.7	2.75
04	---	1.8					2.6	2.85
05	---	1.8					<1.3	2.9
06	(290)	1.9					<1.4	3.0
07	---	2.0					<1.4	3.0
08	250	2.6			---	---	<1.3	2.9
09	225	4.8			---	1.6	1.9	3.2
10	220	6.6			---	1.8	3.0	3.35
11	225	7.5	240	---	---	2.0	2.3	3.45
12	225	8.1	240	---	---	2.1	<2.3	3.35
13	225	8.0	240	---	---	2.1	<2.7	3.4
14	220	7.9			---	1.8	2.3	3.4
15	220	7.4			---	1.6	<1.8	3.35
16	220	6.2					<1.7	3.3
17	220	5.3					<1.4	3.25
18	230	3.7					<1.4	3.1
19	---	2.8					<1.6	3.05
20	---	2.2					<1.4	2.95
21	---	2.0					<1.4	2.9
22	---	1.8					<1.4	(2.75)
23	---	1.8					<1.4	(2.7)

Time: 15.0°E.

Sweep: 0.7 Mc to 25.0 Mc in 5 minutes, automatic operation.

Table 6

Graz, Austria (47.1°N, 15.5°E)

December 1955

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	---	3.4						
01	330	3.6						
02	300	3.6						
03	300	3.6						
04	290	3.6						
05	290	3.6						
06	(270)	3.4						
07	280	3.6						
08	225	6.0						
09	210	7.3						
10	230	8.6						
11	220	8.8						
12	230	8.5						
13	230	8.4						
14	230	8.6						
15	220	8.2						
16	210	7.0						
17	250	5.6						
18	250	4.6						
19	280	3.6						
20	(265)	3.4						
21	---	3.0						
22	---	3.2						
23	340	3.4						

Time: 15.0°E.

Sweep: 2.5 Mc to 12.0 Mc in 2 minutes.

Table 7

Ft. Monmouth, New Jersey (40.3°N, 74.1°W)								December 1955	
Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2	
00	280	3.1					<1.7	2.9	
01	280	3.3					<1.7	2.9	
02	280	3.6					<1.6	2.9	
03	270	3.8					<1.6	3.0	
04	260	3.7					<1.7	3.0	
05	250	3.6					<1.7	3.0	
06	250	3.4					<1.7	3.1	
07	240	4.6	---	---	---	<1.6	<1.6	3.2	
08	230	7.0	---	---	130	2.2		3.5	
09	230	8.2	220	---	120	2.6	2.7	3.4	
10	240	8.7	220	---	120	2.9	3.1	3.3	
11	240	9.8	220	(3.9)	120	3.1	3.3	3.3	
12	240	10.0	220	---	120	(3.2)		3.3	
13	240	9.8	220	---	120	3.0	3.1	3.2	
14	240	9.5	230	---	120	2.8	2.9	3.2	
15	240	9.4	230	---	120	2.5	2.6	3.3	
16	220	8.9	---	---	140	2.0	2.0	3.25	
17	220	7.6	---	---	---	<1.6	<1.7	3.2	
18	230	6.8					<1.7	3.1	
19	230	5.4					<1.7	3.2	
20	240	4.6					<1.7	3.2	
21	250	3.6					<1.7	3.1	
22	<280	3.2					<1.7	3.0	
23	280	3.0					<1.7	3.0	

Time: 75.0°W.

Sweep: 1.0 Mc to 25.0 Mc in 13.5 seconds.

Table 8

Okinawa I. (26.3°N, 127.8°E)								December 1955	
Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2	
00	260	4.3					<1.6	2.85	
01	280	4.4					<1.4	2.9	
02	250	4.4					<1.4	3.1	
03	240	4.0					<1.4	3.1	
04	230	3.7					<1.4	3.3	
05	230	2.9					<1.4	3.1	
06	280	2.5					<1.6	3.0	
07	260	4.3			---	---	<1.6	3.0	
08	240	7.7	240	---	110	>2.2		3.3	
09	240	10.0	230	---	110	>2.8		3.4	
10	250	10.9	230	---	110	3.3	3.6	3.35	
11	240	10.9	220	---	110	3.5	3.8	3.3	
12	260	11.0	220	---	110	>3.5	4.0	3.2	
13	270	12.3	220	---	110	3.5	4.2	3.1	
14	260	(13.0)	230	---	110	3.5	4.0	3.1	
15	250	13.0	230	---	110	>3.2	3.9	3.2	
16	240	12.0	230	---	110	>2.8	3.5	3.2	
17	230	11.4	---	---	120	>2.0	2.6	(3.3)	
18	210	9.9					2.4	3.4	
19	200	8.4					1.9	3.2	
20	210	8.0					2.0	3.15	
21	220	7.6					<1.8	3.15	
22	220	6.4					1.8	3.2	
23	240	>4.8					<1.6	3.05	

Time: 135.0°E.

Sweep: 1.0 Mc to 25.0 Mc in 13.5 seconds.

Table 9

Formosa, China (25.0°N, 121.5°E)								December 1955	
Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2	
00	260	5.3					<1.7	2.7	
01	280	5.3					<1.7	2.9	
02	270	4.6					<1.7	2.9	
03	260	4.1					<1.4	3.0	
04	240	3.5					<1.4	3.1	
05	270	2.6					<1.4	2.8	
06	290	3.0					<1.4	2.6	
07	260	6.7			160	<1.8		3.1	
08	250	9.8	250	---	120	2.6		3.25	
09	260	11.4	250	---	120	3.0		3.3	
10	260	11.9	240	4.6	120	3.3	3.7	3.3	
11	250	12.4	220	4.6	120	3.4	4.0	3.1	
12	280	13.4	220	4.8	120	3.4	4.2	3.0	
13	280	14.2	220	(4.6)	120	3.4	4.1	3.0	
14	270	14.6	240	4.6	120	3.3	4.1	3.1	
15	260	14.1	240	4.5	120	3.1	3.7	3.1	
16	240	13.5	---	---	120	(2.6)	3.3	3.2	
17	230	13.5			140	2.0	<2.4	3.2	
18	210	12.1					2.7	3.3	
19	220	9.8					2.3	3.15	
20	240	9.8					1.9	3.1	
21	230	9.0					2.0	3.2	
22	240	7.1					1.8	3.1	
23	240	5.5					<1.7	2.9	

Time: 120.0°E.

Sweep: 1.1 Mc to 19.5 Mc in 15 minutes, manual operation.

Table 10

Maui, Hawaii (20.8°N, 156.5°W)								December 1955	
Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2	
00	250	3.3					<1.4	3.0	
01	270	3.4					<1.3	2.9	
02	250	3.4						3.15	
03	240	2.9					<1.4	3.3	
04	260	2.4					<1.4	2.9	
05	320	2.2						1.7	2.7
06	290	2.3						2.7	2.8
07	270	5.0						1.8	3.1
08	250	8.2	250	---	120	2.4	4.3	3.3	
09	270	10.3	230	---	110	3.0	5.0	3.2	
10	270	11.6	230	---	110	3.3	6.2	3.3	
11	260	11.4	220	5.0	110	3.5	5.8	3.2	
12	270	11.4	210	4.9	110	3.5	6.8	3.0	
13	290	12.0	210	5.0	110	3.5	5.6	2.9	
14	290	13.0	220	5.0	110	3.4	5.7	3.0	
15	270	13.0	240	---	110	3.2	6.4	3.1	
16	240	11.8	230	---	120	2.8	5.6	3.2	
17	230	10.0			120	2.2	4.4	3.2	
18	220	8.4					4.2	3.4	
19	220	5.8					4.3	3.4	
20	230	5.1					3.3	3.0	
21	240	5.6					3.9	3.1	
22	230	5.4					2.6	3.2	
23	230	4.3					1.4	3.2	

Time: 150.0°W.

Sweep: 1.0 Mc to 25.0 Mc in 13.5 seconds.

Table 11

Puerto Rico, W. I. (18.5°N, 67.2°W)								December 1955	
Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2	
00	250	4.2					<1.8	3.0	
01	260	4.4					<1.8	3.1	
02	250	4.3					<1.8	3.15	
03	240	4.2					<1.8	3.2	
04	260	3.8					<1.8	2.9	
05	260	3.9					<1.8	2.9	
06	260	4.0					<1.7	3.0	
07	240	5.8			---	<1.7	<1.8	3.3	
08	230	7.7	---	---	110	2.5		3.4	
09	250	9.5	230	---	110	3.0		3.4	
10	250	10.0	220	---	110	3.3		3.4	
11	260	10.0	210	4.9	110	3.4	4.0	3.3	
12	260	9.2	210	4.9	110	3.5	4.0	3.3	
13	270	9.0	210	5.0	110	3.5	4.0	3.1	
14	280	9.6	210	4.8	110	3.4	4.2	3.1	
15	270	9.6	220	4.8	110	3.2	4.1	3.2	
16	250	8.9	230	---	110	2.9	3.7	3.2	
17	240	9.0	230	---	120	2.4	3.3	3.3	
18	220	8.1					3.2	3.3	
19	220	6.8					2.6	3.2	
20	230	5.0					<2.2	3.1	
21	260	4.8					<1.8	3.1	
22	250	4.7					<1.8	3.1	
23	240	4.5					<1.8	3.1	

Time: 60.0°W.

Sweep: 1.0 Mc to 25.0 Mc in 13.5 seconds.

Table 12

Guam I. (13.6°N, 144.9°E)								December 1955	
Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2	
00	220	8.0					1.7	3.2	
01	220	7.0					<1.4	3.3	
02	220	6.2					<1.2	3.3	
03	220	5.4					<1.2	3.4	
04	230	4.2					<1.2	3.1	
05	240	3.8					<1.2	3.1	
06	240	3.5					1.6	3.1	
07	250	6.6			130	1.9		3.2	
08	---	9.5	230	---	110	2.6		3.1	
09	(260)	11.8	210	---	110	3.1		3.0	
10	290	12.1	200	---	110	3.3	3.6	2.8	
11	300	11.5	200	---	110	3.4	3.6	2.6	
12	290	10.5	200	4.9	110	3.4	3.6	2.6	
13	300	10.3	200	---	110	3.4	<3.6	2.5	
14	---	11.0	200	---	110	3.3	3.5	2.6	
15	---	11.4	200	---	110	3.2	3.5	2.7	
16	---	12.0	220	---	110	2.9	3.8	2.7	
17	250	12.3	250	---	120	2.4	3.0	2.8	
18	250	12.0					<2.4	3.0	
19	250	10.8					2.2	2.9	
20	250	9.9					<2.0	2.9	
21	250	9.4					3.0	3.0	
22	240	9.0					2.5	3.0	
23	230	8.6					2.1	3.2	

Time: 150.0°E.

Table 13

Panama Canal Zone (9.4°N, 79.9°W)

December 1955

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	230	5.8					<1.8	3.3
01	220	3.4					1.9	3.4
02	240	2.9					1.9	3.1
03	260	2.7					1.9	2.8
04	280	2.7					3.2	2.8
05	290	2.8					3.5	2.7
06	280	3.6					3.2	2.8
07	250	7.1	---	---	120	2.0	3.9	3.3
08	260	9.4	230	---	120	2.8	4.0	3.2
09	270	10.7	230	(5.0)	110	3.2	4.5	3.2
10	280	11.2	210	5.1	110	3.5	5.0	3.15
11	280	11.8	210	5.2	110	3.6	5.2	3.1
12	290	10.8	210	(5.4)	110	(3.7)	5.1	3.05
13	290	10.5	210	5.3	110	3.6	4.9	2.95
14	300	10.6	210	5.2	110	3.5	5.0	2.9
15	280	10.3	210	---	110	3.3	4.7	3.0
16	280	9.9	230	---	120	3.0	4.8	3.0
17	240	9.2	230	---	120	2.5	4.3	3.1
18	230	8.5					4.4	3.2
19	220	7.0					3.5	3.2
20	220	6.0					3.4	3.1
21	240	5.6					3.2	3.0
22	240	5.8					2.2	3.1
23	240	5.4					2.4	3.1

Time: 75.0°W.

Sweep: 1.0 Mc to 25.0 Mc in 13.5 seconds.

Table 14

Fairbanks, Alaska (64.9°N, 147.8°W)

November 1955

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	(300)	2.2					5.0	3.05
01	(320)	(2.6)					4.8	(2.9)
02	(340)	(2.8)					5.4	(2.8)
03	(320)	(2.8)					5.8	(2.8)
04	330	3.3					4.6	2.8
05	330	(3.0)					4.0	2.9
06	310	2.8					4.7	2.8
07	300	3.0					3.8	2.9
08	250	3.7					<2.4	3.2
09	240	5.1	240	---	---	---	2.1	3.3
10	220	6.2	240	---	---	---	2.0	3.3
11	230	6.9	240	---	130	2.1	2.1	3.35
12	230	7.3	230	---	---	---	1.8	3.3
13	220	8.0	230	---	150	2.0	2.0	3.35
14	220	7.8	220	---	---	(1.5)	1.8	3.3
15	220	6.8					<2.0	3.4
16	220	6.0					<1.6	3.3
17	220	4.7					<2.0	3.3
18	240	3.5					<2.4	3.3
19	250	2.7					2.5	3.3
20	270	2.4					3.7	3.2
21	300	2.3					3.5	3.1
22	<300	2.0					4.2	3.0
23	320	(1.8)					4.3	(3.0)

Time: 150.0°W.

Sweep: 1.0 Mc to 25.0 Mc in 13.5 seconds.

Table 15

Reykjavik, Iceland (64.1°N, 21.8°W)

November 1955

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	(330)	(2.8)					4.0	---
01	340	(3.4)					3.9	(2.7)
02	330	(3.5)					3.9	---
03	320	(3.4)					3.0	(2.8)
04	300	(3.2)					<2.2	(2.8)
05	300	(3.2)					<1.8	(2.9)
06	280	(2.8)					1.8	2.9
07	280	2.6					<1.5	2.9
08	280	3.2					<2.3	3.0
09	240	4.4					3.3	3.3
10	230	6.0	---	---			3.3	3.3
11	230	6.9	---	---	---	---	3.3	3.3
12	230	7.4	---	---	---	---	3.3	3.3
13	230	7.2	---	---	---	---	3.3	3.3
14	230	7.0	---	---	---	---	3.3	3.3
15	240	6.6					3.2	3.2
16	240	5.8					<1.6	3.1
17	250	(5.2)					<2.4	3.2
18	260	(4.7)					2.6	(3.2)
19	280	(3.3)					3.3	---
20	300	(3.6)					3.8	---
21	(330)	(3.2)					3.4	---
22	320	(3.0)					3.6	---
23	(320)	(2.8)					3.8	---

Time: 15.0°W.

Sweep: 1.0 Mc to 25.0 Mc in 16.2 seconds.

Table 16

Anchorage, Alaska (61.2°N, 149.9°W)

November 1955

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	---	(2.3)					(1.4)	---
01	(340)	(2.6)					<1.8	(2.8)
02	(360)	(2.4)					<2.0	(2.65)
03	(340)	(2.5)					<1.8	(2.6)
04	(340)	2.9					<1.8	(2.6)
05	(340)	(2.8)					<2.0	(2.6)
06	(330)	2.8					<1.4	(2.6)
07	310	2.8					<1.3	2.85
08	270	3.8					<1.4	3.0
09	250	5.3	---	---			<2.0	3.2
10	250	6.8	---	---			<2.2	3.2
11	250	7.3	---	---	---	---	<2.2	3.2
12	250	8.0	---	---				3.2
13	250	8.0	---	---				3.2
14	240	7.8						3.2
15	240	7.1						3.3
16	240	6.0						3.2
17	240	4.9					<1.4	3.2
18	250	3.6					<1.7	3.2
19	260	2.8					<1.5	3.1
20	(270)	2.1					<1.5	3.1
21	---	1.9					<1.6	(3.1)
22	(300)	(2.0)					<1.6	---
23	(350)	(1.6)					<1.4	(2.9)

Time: 150.0°W.

Sweep: 1.0 Mc to 25.0 Mc in 13.5 seconds.

Table 17

Schwarzenburg, Switzerland (46.8°N, 7.3°E)

November 1955

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	290	3.3						3.2
01	290	3.4						3.2
02	290	3.4						3.2
03	280	3.5						3.2
04	250	3.4						3.3
05	225	3.2						3.5
06	210	3.0						3.6
07	200	3.6						3.6
08	200	6.0			100	2.0		3.9
09	200	7.7			100	2.4		4.0
10	200	8.0			100	2.6		4.0
11	200	9.0			100	2.8		3.8
12	200	9.2			100	3.0		3.8
13	200	9.0			100	3.0		3.8
14	200	8.5			100	2.8		3.7
15	200	8.7			100	2.6		3.8
16	200	8.7			100	2.2		3.8
17	200	7.0						3.9
18	200	5.4						3.65
19	200	4.5						3.5
20	200	4.0						3.6
21	240	3.4						3.5
22	260	3.3						3.3
23	300	3.2						3.3

Time: 15.0°E.

Sweep: 1.0 Mc to 25.0 Mc in 30 seconds.

Table 18

Okinawa I. (26.3°N, 127.8°E)

November 1955

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	260	>4.5					<1.6	2.9
01	260	4.2					<1.4	2.95
02	260	4.0					<1.5	3.0
03	250	>4.4					<1.4	3.1
04	230	>4.4					<1.4	3.3
05	230	2.9					<1.5	3.15
06	290	2.6					<1.7	2.95
07	240	5.2						3.3
08	230	8.0	230	---	110	>2.5		3.4
09	240	9.7	230	---	110	3.0	3.5	3.4
10	250	(10.8)	220	---	110	>3.0	3.7	(3.4)
11	250	11.0	220	---	110	---	4.0	3.3
12	250	11.3	220	---	110	(3.5)	4.3	3.2
13	270	12.5	220	---	110	---	4.4	3.1
14	270	(13.2)	230	---	110	---	4.3	3.2
15	250	13.5	230	---	110	>3.0	4.4	3.2
16	240	12.6	230	---	110	---	3.8	3.3
17	220	12.2	220	2.8	---	---	2.6	3.4
18	210	(9.7)	---	---			2.6	3.4
19	210	(8.7)					2.0	3.25
20	220	8.0					2.1	(3.0)
21	220	8.2					<1.7	3.2
22	220	>6.8					<1.7	(3.2)
23	240	5.0					<1.7	3.1

Time: 135.0°E.

Sweep: 1.0 Mc to 25.0 Mc in 13.5 seconds.

Table 19

Watheroo, W. Australia (30.3°S, 115.9°E) November 1955							
Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs (M3000)F2
00	260	5.5					2.6 3.0
01	260	5.1					2.6 3.0
02	250	4.8					3.1 3.0
03	260	4.5					2.0 2.9
04	260	4.3					1.5 2.9
05	260	4.3				1.4	3.0
06	250	5.2	---	---		2.0	2.2 3.2
07	270	6.0	230	4.0		2.7	3.1 3.2
08	300	6.6	220	4.5		3.1	4.0 3.1
09	340	7.0	200	5.0		3.4	4.0 2.9
10	340	7.4	210	5.1		3.6	4.2 3.0
11	350	7.8	210	5.2		3.7	4.3 2.9
12	340	8.2	210	5.2		3.8	4.3 2.9
13	320	8.3	220	5.2		3.8	4.2 3.0
14	330	8.6	220	5.0		3.7	4.3 3.0
15	310	8.3	220	5.0		3.5	4.1 3.0
16	300	8.1	230	4.7		3.2	3.8 3.1
17	280	7.4	240	4.3		2.7	3.6 3.4
18	250	7.0	---	---		2.2	2.9 3.4
19	240	6.8				1.9	3.5
20	240	6.7				1.6	3.3
21	240	6.0					3.0
22	270	5.7					2.9
23	280	5.4					1.8 2.9

Time: 120.0°E.

Sweep: 1.0 Mc to 16.0 Mc in 1 minute 45 seconds.

Table 21

Baker Lake, Canada (64.3°N, 96.0°W) October 1955							
Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs (M3000)F2
00	260	3.4			110	1.4	6.0 3.1
01	270	3.1			130	1.3	5.8 3.0
02	280	2.8			120	1.1	5.0 2.9
03	290	2.7			120	1.1	5.7 2.9
04	300	2.6			120	1.4	5.2 2.8
05	290	3.0			120	1.4	5.0 2.9
06	280	3.0			120	1.5	5.0 2.9
07	280	3.5	250	---	110	1.9	4.8 3.1
08	280	4.0	240	2.8	110	2.2	4.9 3.1
09	280	4.5	240	3.5	105	2.4	5.0 3.1
10	300	5.0	240	3.5	105	2.8	5.0 3.1
11	300	5.7	260	<3.8	110	2.9	5.0 3.0
12	300	6.3	260	4.0	105	3.0	3.9 3.0
13	280	7.1	240	3.9	110	2.8	3.1 3.1
14	270	7.2	250	3.8	110	2.6	3.8 3.1
15	270	6.9	250	3.4	110	2.4	4.0 3.1
16	260	6.2	250	3.1	110	2.3	4.1 3.1
17	260	5.6	---	---	110	2.1	4.9 3.15
18	270	4.8			120	1.9	5.0 3.0
19	270	4.3			120	1.8	5.0 3.0
20	260	3.9			125	1.6	5.3 2.95
21	250	3.9			120	1.3	7.2 2.95
22	270	3.5			125	1.3	7.1 3.0
23	260	3.5			125	1.3	6.0 2.95

Time: 90.0°W.

Sweep: 0.6 Mc to 10.0 Mc in 16 seconds.

Table 23

De Bilt, Holland (52.1°N, 5.2°E) October 1955							
Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs (M3000)F2
00	290	3.6					2.7
01	290	3.6					2.55
02	290	3.5					2.6
03	280	3.2					2.65
04	250	2.9					2.9
05	230	2.6					2.95
06	240	3.8					3.15
07	220	5.4	230	3.1	125	1.9	3.3
08	230	6.4	220	3.5	115	2.4	3.35
09	240	7.0	210	4.0	110	2.7	2.8 3.3
10	240	7.1	210	4.2	105	2.8	3.1 3.2
11	240	7.9	200	4.1	105	3.0	3.0 3.3
12	245	7.8	210	4.2	105	3.0	3.25
13	240	7.8	220	4.0	110	2.9	3.25
14	235	7.6	225	3.9	110	2.8	3.25
15	230	7.5	230	---	115	2.4	3.2
16	230	7.1	---	---	125	2.0	2.1 3.3
17	220	6.8					3.25
18	230	6.2					3.2
19	230	5.3					3.2
20	230	4.4					3.2
21	240	3.8					2.8
22	275	3.7					2.7
23	280	3.6					2.6

Time: 0.0°.

Sweep: 0.8 Mc to 20.0 Mc in 20 seconds.

Table 20

Fairbanks, Alaska (64.9°N, 147.8°W) October 1955							
Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs (M3000)F2
00	320	(2.3)					4.4 (2.9)
01	340	2.6					5.8 (2.8)
02	(350)	(2.4)					5.6 ---
03	(350)	(3.0)					5.7 (2.7)
04	340	3.0					5.3 2.8
05	340	2.8					4.7 2.85
06	300	2.8					4.1 2.9
07	260	3.6					2.6 3.1
08	(250)	4.4	240	---	120	1.9	1.9 3.25
09	---	4.8	240	---	120	2.0	2.2 3.2
10	320	5.2	230	3.8	120	2.2	2.2 3.1
11	310	5.6	230	4.0	120	2.3	2.3 3.2
12	270	5.8	230	3.9	120	2.3	3.2
13	(300)	6.1	230	3.8	120	2.3	3.2
14	(270)	6.3	240	---	120	2.1	3.2
15	240	6.2	240	---	130	2.0	3.2
16	230	5.8	240	---	---	---	3.2
17	230	5.4					<1.4 3.2
18	230	4.6					<1.5 3.2
19	240	3.8					<1.9 3.2
20	250	3.0					<1.8 3.2
21	270	2.5					2.6 3.25
22	290	2.2					4.4 3.1
23	300	2.1					4.8 3.0

Time: 150.0°W.

Sweep: 1.0 Mc to 25.0 Mc in 13.5 seconds.

Table 22

Churchill, Canada (58.8°N, 94.2°W) October 1955							
Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs (M3000)F2
00	290	3.5			---	---	6.4 ---
01	300	3.4			---	---	6.0 ---
02	330	3.6			---	---	6.0 (3.1)
03	300	3.6			---	3.0	5.0 (3.0)
04	340	3.8			120	3.0	4.8 (3.1)
05	360	3.8			120	3.0	4.6 (2.7)
06	330	3.8			120	2.0	5.0 ---
07	310	4.0			115	2.7	4.7 3.1
08	280	5.0	---	---	120	2.5	4.6 3.1
09	280	5.6	230	---	120	2.7	4.3 3.2
10	290	6.0	220	3.9	120	2.8	3.9 3.1
11	300	6.7	230	4.0	120	2.8	3.0
12	290	6.8	230	3.9	120	3.0	3.0
13	280	7.7	230	4.0	120	2.8	2.8 3.0
14	280	7.3	240	4.0	120	2.8	3.1
15	270	7.5	240	3.7	120	2.6	3.0
16	250	7.2	---	---	130	2.2	3.1
17	250	7.0			130	2.0	3.3 3.1
18	280	6.0			125	2.5	3.4 3.15
19	290	4.8			125	2.8	4.0 (3.1)
20	300	4.5			120	2.2	4.3 (3.0)
21	280	4.0			---	---	4.7 ---
22	290	3.9			---	---	6.0 ---
23	280	3.8			---	---	6.0 ---

Time: 90.0°W.

Sweep: 0.6 Mc to 10.0 Mc in 16 seconds.

Table 24

Winnipeg, Canada (49.9°N, 97.4°W) October 1955							
Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs (M3000)F2
00	300	2.8					<1.7 2.8
01	320	2.4					<1.7 2.8
02	330	2.2					<1.8 2.7
03	340	2.4					3.0 (2.7)
04	330	2.3					<2.0 2.7
05	330	2.4					2.2 2.8
06	330	2.5					3.0 2.8
07	270	3.8	---	---	120	(1.9)	3.0
08	260	5.0	240	---	125	2.2	3.1
09	280	5.8	230	3.8	120	2.6	3.1
10	290	6.3	220	4.0	120	2.8	3.0
11	290	6.8	220	4.1	120	3.0	3.0
12	290	7.2	220	4.2	120	3.0	3.0
13	290	7.4	230	4.1	115	3.0	3.0
14	280	7.6	240	4.0	115	3.0	3.0
15	280	7.6	240	4.0	120	2.8	3.0
16	260	7.4	240	3.9	120	2.5	3.1
17	240	7.0	240	---	130	2.0	3.1
18	240	6.4			---	1.7	3.1
19	240	5.8					<1.7 3.0
20	250	4.7					<1.7 3.0
21	260	3.8					<1.7 3.0
22	280	3.2					<1.7 2.9
23	290	2.9					<1.7 2.9

Time: 90.0°W.

Sweep: 1.0 Mc to 25.0 Mc in 16 seconds.

Table 25

San Francisco, California (37.4°N, 122.2°W)

October 1955

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	250	(3.6)					(2.2)	(3.0)
01	250	(3.6)					(2.3)	(2.8)
02	<270	(3.6)					(2.5)	(2.8)
03	260	(3.6)					(2.5)	(2.8)
04	<260	(3.7)					(2.3)	(2.9)
05	250	(3.7)					(2.4)	(2.9)
06	250	(4.0)					(2.3)	(3.0)
07	230	(6.4)	230	---	<120	(2.0)	(3.4)	(3.4)
08	230	(7.0)	220	(4.0)	(110)	(2.5)	(3.4)	(3.4)
09	250	7.5	200	(4.2)	(100)	(2.8)	(3.9)	3.3
10	250	7.9	200	(4.5)	(100)	(3.0)	(3.8)	3.2
11	260	8.8	200	(4.5)	(100)	(3.2)	3.5	3.1
12	270	9.2	210	(4.5)	<110	(3.3)	3.05	
13	260	9.2	220	(4.6)	<110	(3.3)	(3.4)	3.1
14	260	9.0	<220	(4.5)	(110)	(3.2)	3.2	
15	250	8.8	220	(4.2)	(110)	(3.0)	(3.6)	3.3
16	230	8.2	230	---	(110)	(2.5)	(3.3)	3.4
17	210	7.5	---	---	---	(2.0)	(3.1)	3.5
18	<210	5.8	---	---	---		(3.2)	3.4
19	210	4.4	---	---	---		(2.6)	3.2
20	<230	(3.9)	---	---	---		(2.5)	(3.2)
21	<250	(3.4)	---	---	---		(2.5)	(3.0)
22	<260	(3.7)	---	---	---		(2.2)	(2.9)
23	250	(3.6)	---	---	---		<1.7	(3.0)

Time: 120.0°W.

Sweep: 1.0 Mc to 25.0 Mc in 13.5 seconds.

Table 27

Leopoldville, Belgian Congo (4.4°S, 15.2°E)

October 1955

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M2000)F2
00	240	6.2						2.2
01	250	6.1					1.6	2.3
02	240	5.8					1.5	2.4
03	230	5.1					1.7	2.6
04	220	3.8					2.2	2.8
05	235	5.7	---	---	130	1.7	2.9	2.7
06	250	7.2	230	---	115	2.5	3.2	2.6
07	280	8.0	220	---	110	3.1	3.9	2.4
08	300	8.7	215	4.6	110	3.4	4.2	2.1
09	340	9.9	210	4.9	110	3.6	3.8	2.0
10	395	11.0	210	5.0	110	3.7	4.0	2.0
11	400	11.4	200	5.0	110	3.6		2.0
12	390	13.0	200	4.9	110	3.6		2.0
13	360	13.4	215	4.6	110	3.5		<2.1
14	325	>13.6	225	4.6	110	3.3	3.5	2.2
15	315	>13.6	230	---	110	2.8	3.6	2.2
16	300	13.6	245	---	120	2.2	3.0	2.1
17	270	>13.3					2.4	2.2
18	280	>13.6					2.0	<2.2
19	255	>14.0						<2.5
20	220	>14.0						<2.5
21	210	13.6						<2.5
22	205	>11.4						2.5
23	210	8.0						2.3

Time: 0.0°.

Sweep: 1.0 Mc to 16.0 Mc in 7 seconds.

Table 29

Elisabethville, Belgian Congo (11.6°S, 27.5°E)

October 1955

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M2000)F2
00	255	4.9						2.2
01	255	4.7					1.6	2.2
02	250	4.4					2.1	2.3
03	250	3.8					1.7	2.4
04	235	5.4			140	1.7	2.1	2.6
05	240	7.2	230	---	115	2.5		2.7
06	255	7.5	215	---	110	3.0		2.5
07	280	8.5	210	4.6	105	3.4		2.3
08	290	9.1	210	4.9	105	3.6		2.2
09	305	9.7	200	5.0	105	3.7		2.1
10	320	10.0	200	5.0	105	3.7		2.1
11	330	10.9	200	5.0	105	3.7		2.05
12	325	11.3	210	4.6	110	3.6		2.0
13	310	11.4	215	---	110	3.3	4.5	2.1
14	300	11.6	220	---	110	3.0	4.2	2.15
15	275	11.6	240	---	115	2.3	3.5	<2.2
16	250	11.6					2.9	2.2
17	250	11.3					2.6	2.2
18	250	>11.4					2.4	2.2
19	235	11.0					2.2	2.3
20	220	9.8					2.4	2.4
21	225	9.0					2.3	2.3
22	230	7.8					2.4	2.4
23	220	6.1					2.3	2.3

Time: 0.0°.

Sweep: 1.0 Mc to 16.0 Mc in 7 seconds.

Table 26

Baguio, P. I. (16.4°N, 120.6°E)

October 1955

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	240	10.3					<1.9	3.15
01	230	9.4					2.1	3.3
02	220	8.9					<1.5	3.4
03	210	6.0					<1.3	3.5
04	220	4.0					1.8	3.2
05	240	3.2					2.1	3.1
06	250	5.2			---	---	2.3	3.2
07	240	7.8			110	2.3	4.0	3.3
08	270	9.4	220	---	110	2.8	4.1	3.1
09	290	10.5	220	---	110	3.2	4.6	3.0
10	300	11.8	210	---	110	3.3	5.0	2.7
11	300	11.4	200	---	110	3.4	4.6	2.45
12	310	10.7	200	---	110	3.5	4.0	2.4
13	310	11.1	200	---	110	3.5	<3.8	2.5
14	310	12.1	200	---	110	3.3	4.6	2.6
15	300	12.6	210	---	110	3.0	6.0	2.7
16	270	12.5	230	---	120	2.7	4.2	2.8
17	250	12.4			---	---	3.5	2.8
18	270	12.0					2.8	2.8
19	280	11.6					2.0	2.7
20	250	11.2					1.9	3.0
21	240	11.2					2.1	3.0
22	240	11.0					2.3	3.1
23	240	10.6					2.0	3.1

Time: 120.0°E.

Sweep: 1.0 Mc to 25.0 Mc in 13.5 seconds.

Table 28

Talara, Peru (4.6°S, 81.3°W)

October 1955

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	210	9.7					4.0	3.3
01	220	7.7					4.1	3.4
02	220	6.0					3.0	3.4
03	230	4.5					2.6	3.35
04	240	3.4					3.0	3.3
05	250	3.1					3.5	3.2
06	270	4.3					3.6	3.1
07	240	7.8	240	---	120	2.3	3.0	3.3
08	---	9.7	220	---	110	2.9	3.6	3.1
09	---	10.8	210	---	110	3.3	4.7	3.0
10	(300)	11.0	200	4.8	110	3.6	4.4	2.55
11	320	11.0	200	4.9	110	3.7	4.4	2.45
12	330	11.0	200	4.9	110	3.7	5.0	2.3
13	(320)	10.7	200	4.8	110	3.7	4.4	2.4
14	(300)	10.5	200	4.8	110	3.6	4.8	2.5
15	---	10.8	200	---	110	3.3	4.6	2.5
16	---	10.8	210	---	110	3.0	4.5	2.5
17	240	11.0	240	---	110	2.4	3.5	2.6
18	260	(11.2)					3.0	(2.7)
19	270	(11.2)					2.3	(2.8)
20	290	11.9					<2.0	2.95
21	240	11.3					<1.7	3.15
22	220	11.0					2.1	3.3
23	220	10.4					2.8	3.3

Time: 75.0°W.

Sweep: 1.0 Mc to 25.0 Mc in 13.5 seconds.

Table 30

Huancayo, Peru (12.0°S, 75.3°W)

October 1955

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	240	9.3					<1.5	3.1
01	220	7.8					<1.5	3.2
02	230	6.2					<1.5	3.3
03	230	5.0					<1.5	3.3
04	230	4.4					<1.5	3.3
05	240	3.6					<1.3	3.3
06	240	6.4			120	1.7		3.3
07	---	8.8	220	---	110	2.6	5.0	3.2
08	(270)	10.1	210	4.6	110	3.1	10.9	3.0
09	(280)	10.4	200	4.7	110	---	11.7	2.6
10	310	10.1	200	4.8	110	---	12.8	2.5
11	320	9.2	190	5.0	110	---	12.8	2.5
12	320	9.2	190	4.8	110	---	12.8	2.5
13	310	9.3	190	4.9	110	---	12.8	2.5
14	290	9.5	190	4.6	110	---	12.3	2.5
15	---	10.0	200	---	110	---	11.4	2.5
16	---	10.2	200	---	110	---	10.4	2.5
17	240	10.3	230	---	110	2.3	7.6	2.5
18	270	10.2					<1.7	2.5
19	310	9.4					<1.5	2.4
20	310	9.2					<1.5	2.5
21	300	9.0					<1.5	2.8
22	270	9.4					<1.5	2.9
23	270	9.7					<1.5	3.05

Time: 75.0°W.

Sweep: 1.0 Mc to 25.0 Mc in 13.5 seconds.

Table 31

Buenos Aires, Argentina (34.5°S, 58.5°W)							
October 1955							
Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs (M3000)F2
00	290	6.9					2.9
01	290	6.9					2.9
02	260	7.3					3.0
03	210	6.7					3.3
04	220	5.0					3.2
05	260	5.1	---	---			3.0
06	220	6.4	---	---	110	2.1	2.9
07	220	7.4	220	---	120	(2.8)	3.5
08	270	8.3	220	---	100	3.1	3.8
09	280	9.1	210	---	---	---	3.8
10	300	10.0	200	---	---	---	4.3
11	300	10.9	200	---	---	---	4.0
12	300	11.8	200	---	---	---	4.0
13	300	12.8	200	---	---	---	4.0
14	290	13.2	200	---	---	---	3.7
15	280	13.4	210	---	---	---	3.6
16	270	12.6	220	---	---	---	3.2
17	250	11.9	230	---	---	---	3.3
18	230	11.7					3.35
19	220	10.2					3.35
20	230	9.0					3.1
21	280	8.1					2.9
22	300	8.2					2.9
23	300	7.7					2.9

Time: 60.0°W.

Sweep: 1.0 Mc to 25.0 Mc in 27 seconds.

Table 32

Kiruna, Sweden (67.8°N, 20.3°E)							
September 1955							
Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs (M3000)F2
00	(330)	(2.8)					2.3 (2.8)
01	(350)	(3.1)					3.0 (2.7)
02	(340)	(2.7)					2.2 (2.9)
03	(325)	(2.6)					<1.9 (2.85)
04	(300)	(3.0)					(2.8)
05	300	3.0					<1.8 2.9
06	285	3.9	---	---	---	---	3.0
07	300	4.2	---	3.4	---	---	3.0
08	300	4.8	240	3.3	130	---	3.1
09	300	5.1	240	3.5	120	---	3.1
10	310	5.2	240	3.8	---	---	3.1
11	280	5.6	240	3.8	---	---	3.1
12	290	5.8	240	3.8	---	---	3.2
13	280	5.2	240	3.7	---	---	3.25
14	280	5.2	---	3.4	---	---	<3.1 3.2
15	270	5.0	---	3.3	---	---	<3.0 3.2
16	270	5.0	---	---	130	2.0	3.1
17	270	4.8	---	---	---	---	<2.8 3.1
18	260	4.8	---	---	---	---	<1.9 3.0
19	255	4.8	---	---	---	---	<1.9 3.1
20	260	4.2	---	---	---	---	<1.9 2.95
21	280	3.6	---	---	---	---	2.6 2.9
22	320	3.2	---	---	---	---	<2.2 2.8
23	(305)	(3.0)	---	---	---	---	<2.0 (2.95)

Time: 15.0°E.

Sweep: 0.8 Mc to 15.0 Mc in 30 seconds.

Table 33

Fairbanks, Alaska (64.9°N, 147.8°W)							
September 1955							
Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs (M3000)F2
00	(340)	(2.1)					5.5 (2.9)
01	(340)	(2.7)					5.5 (2.9)
02	330	2.9					5.2 2.9
03	360	3.0					5.1 2.8
04	360	(3.2)					4.6 (2.9)
05	290	3.2			---	---	4.4 3.0
06	330	3.6	270	3.1	---	---	3.9 3.1
07	400	4.1	230	3.4	110	2.1	2.3 3.1
08	380	4.2	220	3.7	110	2.4	2.6 2.85
09	420	4.3	220	3.8	110	2.5	2.5 2.85
10	400	4.7	210	3.9	110	2.6	2.6 2.85
11	390	4.8	220	4.0	110	2.7	2.9
12	380	4.9	220	4.0	110	2.7	2.9
13	340	4.9	220	4.0	110	2.7	3.0
14	340	4.8	220	4.0	110	2.6	3.0
15	320	4.8	230	3.8	110	2.4	3.1
16	300	4.7	230	3.8	120	2.2	3.2
17	(240)	4.9	240	---	130	2.0	3.2
18	240	4.6	240	---	---	---	1.7 3.2
19	250	4.2					<1.8 3.2
20	260	3.4					<2.2 3.05
21	280	(2.7)					3.9 3.1
22	300	(2.6)					4.6 3.15
23	300	(2.5)					4.6 (3.0)

Time: 150.0°W.

Sweep: 1.0 Mc to 25.0 Mc in 13.5 seconds.

Table 34

Johannesburg, Union of S. Africa (26.2°S, 28.1°E)							
September 1955							
Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs (M3000)F2
00	240	3.5					3.05
01	<240	3.4					3.1
02	230	3.4					3.2
03	<220	2.9					3.0
04	---	2.7					2.9
05	---	2.8					2.9
06	250	3.8					3.2
07	230	5.9	230	---	120	2.1	3.4
08	250	6.8	220	4.1	110	2.7	3.3
09	270	7.4	210	4.5	110	3.1	3.3
10	280	7.8	210	4.7	110	3.3	3.2
11	290	8.2	200	4.8	110	3.4	3.1
12	290	8.4	200	4.8	110	3.5	3.1
13	290	8.7	200	4.8	110	3.4	3.0
14	290	8.8	200	4.6	110	3.3	3.6 3.0
15	280	8.6	210	4.4	110	3.1	3.8 3.1
16	260	8.1	210	4.0	120	2.8	3.6 3.1
17	240	8.0	230	3.2	120	2.3	3.0 3.2
18	220	7.4			---	---	3.2
19	220	6.4					3.2
20	220	5.0					3.2
21	240	3.6					3.1
22	250	3.6					3.1
23	<250	3.5					3.1

Time: 30.0°E.

Sweep: 1.0 Mc to 15.0 Mc in 7 seconds.

Table 35

Capetown, Union of S. Africa (34.2°S, 18.3°E)							
September 1955							
Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs (M3000)F2
00	<250	3.2					3.0
01	250	3.1					3.0
02	<260	3.2					3.0
03	250	3.4					3.0
04	240	3.2					3.0
05	250	3.4					2.9
06	<260	3.2					3.0
07	240	4.8					3.3
08	240	6.1	230	3.6	120	2.3	3.4
09	260	6.7	220	4.1	120	2.7	3.3
10	270	7.0	220	4.4	110	3.0	3.2
11	290	7.7	210	4.6	110	3.2	3.1
12	300	8.2	210	4.7	110	3.4	2.9
13	300	9.1	210	4.7	110	3.4	3.0
14	280	9.3	220	4.6	110	3.3	3.1
15	280	9.0	220	4.5	110	3.2	3.4
16	270	8.6	220	4.2	120	2.9	3.4
17	250	8.2	230	3.6	120	2.6	3.1
18	240	7.9	240	2.7	120	1.9	2.4
19	220	6.6					3.3
20	220	5.0					3.2
21	240	3.7					3.1
22	<250	3.6					3.1
23	<250	3.2					3.1

Time: 30.0°E.

Sweep: 1.0 Mc to 15.0 Mc in 7 seconds.

Table 36

Point Barrow, Alaska (71.3°N, 156.8°W)							
August 1955							
Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs (M3000)F2
00	(280)	---					7.2 ---
01	260	(3.6)					6.4 ---
02	250	(3.6)	---	---	---	---	5.2 ---
03	(260)	(3.8)	---	---	---	---	4.0 ---
04	(250)	(3.9)	---	---	---	---	4.0 ---
05	(290)	---	---	---	---	---	3.9 ---
06	(360)	(4.0)	(240)	(3.4)	110	(2.1)	3.9 (3.0)
07	(340)	(4.4)	(240)	(3.6)	---	---	4.6 (2.9)
08	(360)	(4.5)	(220)	(3.7)	100	2.4	4.0 (2.95)
09	390	(4.6)	210	(3.8)	100	2.5	4.5 2.85
10	370	(4.5)	210	(3.9)	100	2.6	4.0 (3.0)
11	380	(4.5)	210	3.9	100	(2.7)	3.2 2.9
12	360	4.6	210	3.9	100	2.8	3.2 3.0
13	360	4.7	210	3.9	100	(2.7)	<3.0 3.05
14	(380)	4.6	210	(3.9)	100	(2.7)	<3.2 3.0
15	350	4.7	210	3.9	100	2.6	<3.0 3.0
16	340	4.6	220	(3.8)	100	2.4	2.8 3.1
17	340	4.6	220	(3.8)	100	(2.4)	2.7 3.1
18	310	4.6	220	(3.5)	110	(2.2)	2.8 3.1
19	(280)	(4.6)	230	---	110	1.9	3.4 (3.2)
20	240	(4.0)	240	---	120	(1.4)	3.6 (3.3)
21	(260)	(3.7)	---	---	---	---	4.0 (3.1)
22	(280)	(3.7)	---	---	---	---	4.0 ---
23	---	---	---	---	---	---	6.0 ---

Time: 150.0°W.

Sweep: 1.0 Mc to 25.0 Mc in 13.5 seconds.

Table 37

Godhavn, Greenland (69.2°N, 53.5°W)								August 1955
Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	260	(3.7)					<1.4	(3.0)
01	250	(3.3)					3.2	(3.1)
02	270	(3.2)					4.1	(3.05)
03	270	(2.8)					3.2	
04	270	(3.2)	240				<2.3	(3.1)
05	(320)	(3.6)	230				3.7	(2.8)
06	---	(3.8)	220	(3.2)	110		3.7	(3.3)
07	(520)	(4.2)	210	(3.4)	110	(2.2)	3.8	(3.1)
08	(370)	(4.4)	220	3.7	110	2.5	<3.3	(3.1)
09	(350)	(4.7)	210	(3.8)	(110)	(2.6)	<3.5	3.1
10	350	(4.8)	210	4.0	110	2.7	3.0	3.1
11	340	(4.8)	200	4.0	110	(2.7)	3.0	3.15
12	370	(5.0)	200	4.0	110	2.8	3.2	(3.0)
13	350	(4.9)	200	4.0	110	2.7	2.9	(3.0)
14	(360)	(4.9)	210	4.0	110	(2.7)	3.0	(3.1)
15	(340)	(4.9)	200	4.0	110	2.6	6.6	(3.0)
16	(340)	(4.8)	200	3.8	110	2.5	5.8	(3.1)
17	320	(4.8)	210	3.8	110	2.4	6.0	(3.1)
18	320	(4.6)	230	3.5	(110)	(2.2)	4.5	(3.1)
19	(300)	(4.6)	230	(3.4)	(110)	(1.8)	4.0	(3.2)
20	(250)	(4.4)	240	---	---	---	3.9	(3.2)
21	250	(4.3)	250	---	---	---	4.0	(3.3)
22	250	(4.0)	---	---	---	---	2.9	3.2
23	250	(3.7)	---	---	---	---	3.0	(3.1)

Time: 45.0°W.

Sweep: 1.0 Mc to 25.0 Mc in 16.2 seconds.

Table 38

Nairobi, Kenya (1.3°S, 36.8°E)								August 1955
Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	<220	6.3					2.0	3.2
01	210	>6.6					1.9	3.2
02	<220	5.0					2.3	3.25
03	230	4.1					2.3	3.15
04	<240	4.0					2.6	3.05
05	<250	3.1					2.8	3.1
06	240	2.7					2.8	3.1
07	260	5.1	250	---	---	---	3.1	3.4
08	280	7.4	230	4.2	120	2.6	4.0	3.3
09	290	9.2	220	4.4	110	3.0	4.7	3.3
10	280	10.0	220	4.6	110	3.3	4.4	3.3
11	280	9.5	200	4.7	100	3.5	4.6	3.3
12	280	9.6	200	4.8	100	3.6	4.1	3.2
13	300	10.0	(200)	(4.8)	110	(3.6)	4.6	3.0
14	300	9.9	200	4.7	110	3.5		3.0
15	300	9.1	200	4.6	110	3.4		3.0
16	310	8.7	200	4.5	110	3.1		2.9
17	300	8.4	220	4.1	110	2.8	3.6	2.9
18	270	8.2	250	3.8	120	2.1	3.2	2.9
19	250	>8.3					3.2	3.0
20	250	8.8					3.1	3.1
21	230	8.5					2.7	3.3
22	210	8.1					2.5	3.5
23	210	5.9						3.4

Time: 45.0°E.

Sweep: 1.0 Mc to 15.0 Mc in 7 seconds.

Table 39*

Inverness, Scotland (57.4°N, 4.2°W)								July 1955
Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	260	4.5						2.9
01	265	4.0						2.9
02	265	3.6					2.4	2.9
03	265	(3.4)			125	1.1	1.6	(2.9)
04	260	3.6			120	1.5	2.6	3.0
05	320	4.0	230	3.1	110	1.8	2.8	3.1
06	355	4.4	225	3.6	115	2.2	2.8	3.1
07	370	4.6	215	3.9	110	2.5	3.0	(3.1)
08	370	4.8	225	4.0	105	2.7	3.3	3.1
09	375	5.0	210	4.2	105	2.9	3.5	3.0
10	375	5.0	210	4.3	105	3.0	3.7	3.0
11	360	5.3	205	4.4	100	3.1	3.5	3.1
12	370	5.2	205	4.5	100	3.1		3.0
13	365	5.2	200	4.4	105	3.2		3.1
14	385	5.1	210	4.4	105	3.2		2.9
15	400	5.1	210	4.3	105	3.1		2.9
16	365	5.2	210	4.3	105	3.0	3.4	2.9
17	355	5.3	215	4.1	105	2.8	3.3	3.0
18	320	5.2	230	3.8	115	2.4	3.3	3.0
19	300	5.5	235	3.5	120	2.1	3.2	3.1
20	255	5.5	(235)	(2.6)	130	1.8	2.7	3.1
21	250	5.5						3.1
22	250	5.4						3.0
23	255	(5.1)						2.9

Time: 0.0°.

Sweep: 0.67 Mc to 25.0 Mc in 5 minutes.

*Average values except foF2 and fEs, which are median values.

Table 40*

Slough, England (51.5°N, 0.6°W)								July 1955
Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	265	4.8					2.6	2.9
01	260	4.4					2.6	2.9
02	265	3.9					2.6	2.9
03	270	3.8					3.1	2.9
04	275	3.6	(270)	(2.5)	115	1.3	3.6	2.95
05	320	4.1	235	3.3	120	1.8	3.2	3.0
06	330	4.7	225	3.7	115	2.3	4.2	3.0
07	350	4.8	225	4.0	110	2.7	4.4	3.05
08	375	5.2	220	4.3	110	2.9	4.7	3.0
09	365	5.2	220	4.4	110	3.1	4.8	3.0
10	355	5.6	215	4.5	110	3.2	5.2	3.0
11	360	5.6	225	4.5	110	3.2	5.2	3.0
12	350	5.7	220	4.5	105	3.3	5.0	3.1
13	350	5.4	210	4.5	105	3.3	4.9	3.05
14	370	5.4	215	4.5	110	3.2	5.0	3.0
15	360	5.3	225	4.4	110	3.2	4.7	3.0
16	355	5.5	215	4.3	110	3.0	5.0	2.95
17	320	5.4	225	4.1	110	2.8	4.7	3.1
18	305	5.8	225	3.8	110	2.4	4.7	3.05
19	285	6.1	235	3.3	115	1.9	5.0	3.05
20	250	6.6					3.6	3.15
21	255	6.3					3.8	3.1
22	245	5.8					3.0	3.05
23	255	4.9					2.6	2.9

Time: 0.0°.

Sweep: 0.55 Mc to 16.5 Mc in 5 minutes.

*Average values except foF2 and fEs, which are median values.

Table 41*

Singapore, British Malaya (1.3°N, 103.8°E)								July 1955
Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	240	4.5					5.1	---
01	255	4.2					3.9	(3.3)
02	250	3.3					3.7	---
03	255	2.7					3.0	---
04	245	2.3					2.8	---
05	(255)	2.0					3.4	---
06	265	3.1					2.9	---
07	(250)	6.0	245			2.2	3.7	3.1
08	300	7.9	220	4.2	120	2.8	4.6	2.9
09	315	9.0	205	4.4	(110)	3.1	5.1	2.8
10	340	9.6	200	4.6		3.4	9.9	2.7
11	360	9.3	200	4.6	110	3.5	10.0	2.5
12	375	9.2	200	4.6	110	3.6	6.9	2.5
13	365	9.0	200	4.6	110	3.5	6.6	2.5
14	365	8.9	200	4.5	110	3.4	6.0	2.5
15	335	9.1	210	4.4	110	3.2	4.2	2.6
16	310	9.0	215	4.2	110	2.9	5.1	2.7
17	(270)	8.8	225		110	2.4	4.7	2.9
18	245	8.6			155	1.9	4.7	3.0
19	250	7.9					4.2	3.0
20	240	7.8					4.0	3.2
21	225	6.3					4.4	3.3
22	225	5.2					4.4	(3.3)
23	235	4.0					4.7	(3.1)

Time: 105.0°E.

Sweep: 0.67 Mc to 25.0 Mc in 5 minutes.

*Average values except foF2 and fEs, which are median values.

Table 42

Godhavn, Greenland (69.2°N, 53.5°W)								June 1955
Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	(250)	(4.0)	240	---	120	1.4	1.7	(3.2)
01	(260)	(4.2)	250	---	140	(1.4)	1.7	(3.0)
02	(260)	(4.0)	230	---	(130)	1.5	1.9	---
03	(310)	(4.0)	230	(2.9)	120	(1.6)	2.6	(3.1)
04	(310)	(4.1)	220	(3.2)	110	1.8	3.3	(3.1)
05	370	(4.2)	200	(3.3)	110	2.1	3.2	(2.95)
06	380	(4.0)	210	(3.5)	110	2.3	3.5	6
07	(380)	(4.6)	200	(3.7)	100	2.5	3.5	(3.0)
08	(380)	(4.5)	210	(3.8)	100	2.7	4.0	6
09	(380)	(4.7)	210	(4.0)	100	2.8	3.5	(2.9)
10	420	(4.7)	210	4.0	100	2.9	3.4	(2.8)
11	390	(4.8)	210	4.1	100	2.9	3.3	2.9
12	410	(5.0)	210	4.1	100	3.0	3.1	(2.9)
13	400	(4.9)	200	4.1	100	2.9	3.0	2.9
14	(390)	(4.8)	210	4.2	100	2.8	3.5	2.95
15	390	(4.8)	210	4.1	100	2.8	4.4	(2.9)
16	390	(4.7)	210	4.0	100	2.7	4.6	(2.9)
17	360	(4.6)	200	3.9	100	2.6	4.4	(2.9)
18	360	(4.6)	210	3.7	100	2.5	5.0	(2.9)
19	340	(4.6)	220	(3.6)	100	2.3	4.6	(3.0)
20	(310)	(4.5)	220	(3.4)	110	2.1	4.2	(3.1)
21	(290)	(4.4)	240	(3.1)	120	1.8	3.5	(3.2)
22	(290)	(4.2)	240	---	120	1.6	3.2	(3.1)
23	260	(4.1)	240	---	(120)	1.4	1.8	(3.2)

Time: 45.0°W.

Sweep: 1.0 Mc to 25.0 Mc in 16.2 seconds.

Table 43*

Inverness, Scotland (57.4°N, 4.2°W)								June 1955
Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	260	(4.6)						(2.9)
01	265	(4.1)					1.2	(2.8)
02	265	(3.7)				(0.9)	1.3	(2.7)
03	280	(3.7)			135	1.2	1.7	(2.8)
04	305	3.9	255	2.7	115	1.6	2.2	2.8
05	335	4.3	235	3.3	115	1.9	2.3	2.9
06	385	4.5	225	3.6	115	2.2	2.8	2.9
07	390	4.7	220	3.9	115	2.5	2.9	2.8
08	385	4.8	220	4.1	110	2.7	3.2	2.9
09	385	5.0	215	4.2	105	2.9	3.5	3.0
10	395	5.0	210	4.3	105	3.0	3.8	3.1
11	395	5.2	210	4.4	105	3.1	3.7	2.9
12	395	5.1	210	4.4	105	3.1	4.0	(2.9)
13	390	5.2	210	4.4	105	3.1	3.7	2.9
14	405	5.0	210	4.4	105	3.1	3.6	2.8
15	400	5.0	215	4.3	105	3.1	3.6	2.9
16	360	5.1	220	4.2	110	2.9	3.5	2.9
17	345	5.2	220	4.0	110	2.7	3.2	2.9
18	330	5.2	230	3.8	115	2.4	3.1	2.9
19	300	5.4	235	3.5	120	2.1	2.9	3.0
20	260	5.3	240	(2.8)	135	1.8	2.7	3.1
21	260	5.5					2.2	3.0
22	245	5.4						2.9
23	260	4.8						(2.8)

Time: 0.0°.

Sweep: 0.67 Mc to 25.0 Mc in 5 minutes.

*Average values except foF2 and fEs, which are median values.

Table 44*

Slough, England (51.5°N, 0.6°W)								June 1955
Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	265	4.6					2.7	2.9
01	270	4.4					2.9	2.85
02	280	4.0					3.3	2.85
03	280	3.8					3.8	2.9
04	300	3.8	260	2.7	125	1.4	3.9	2.9
05	330	4.4	230	3.3	120	1.9	4.4	2.95
06	350	4.6	230	3.8	115	2.3	4.8	2.95
07	370	5.0	230	4.0	115	2.7	4.6	2.95
08	365	5.2	235	4.2	110	2.9	5.0	3.0
09	350	5.4	235	4.4	110	3.1	5.1	3.15
10	385	5.2	225	4.5	110	3.2	5.8	3.05
11	365	5.5	225	4.5	105	3.3	5.0	3.05
12	380	5.3	230	4.5	105	3.3	5.0	3.05
13	390	5.4	225	4.5	110	3.3	5.0	2.95
14	365	5.2	215	4.4	110	3.2	4.8	3.05
15	370	5.3	220	4.4	110	3.1	5.4	2.95
16	345	5.4	225	4.2	110	3.0	4.9	3.05
17	330	5.5	230	4.1	115	2.7	4.7	3.05
18	305	5.6	230	3.8	115	2.4	4.4	3.05
19	285	5.9	240	3.3	120	1.9	4.3	3.1
20	255	6.5					4.0	3.05
21	250	6.2					3.3	3.0
22	250	5.9					3.6	3.05
23	260	5.3					2.8	2.9

Time: 0.0°.

Sweep: 0.55 Mc to 16.5 Mc in 5 minutes.

*Average values except foF2 and fEs, which are median values.

Table 45

Delhi, India (28.6°N, 77.1°E)								June 1955
Time	*	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	280	5.5						3.25
01	280	5.3						3.25
02	---	(5.0)						---
03								
04	280	4.8						3.25
05	280	4.6						3.25
06	280	5.3						3.25
07	280	6.2						3.25
08	280	6.6						3.25
09	300	7.2						3.1
10	320	7.4						3.0
11	320	7.9						3.0
12	320	8.2						3.0
13	320	8.6						3.0
14	300	8.5						3.1
15	310	8.6						3.05
16	300	8.5						3.1
17	300	8.3						3.1
18	280	8.2						3.25
19	280	8.2						3.25
20	260	7.2						3.4
21	260	6.2						3.4
22	300	6.0						3.1
23	280	5.4						3.25

Time: 75.0°E.

Sweep: 1.5 Mc to 18.0 Mc in 5 minutes, manual operation.

*Height at 0.83 foF2.

Table 46

Ahmedabad, India (23.0°N, 72.6°E)								June 1955
Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	305	4.8					4.0	2.9
01	290	4.8					3.8	2.95
02	290	4.3					3.9	3.0
03	300	3.8					3.8	2.95
04	300	3.6					3.9	3.05
05	270	3.5					3.6	3.15
06	250	4.7	245	(3.5)	125	1.8	3.7	3.25
07	275	5.8	225	4.0	110	2.4	4.0	3.3
08	290	6.2	220	4.2	110	2.9	4.0	3.2
09	320	6.8	210	4.4	110	3.1	4.4	3.1
10	350	7.2	200	4.5	110	3.3	5.6	2.8
11	400	7.9	205	4.6	110	3.4	6.0	2.6
12	360	9.1	210	4.6	110	3.4	6.0	2.85
13	360	9.4	220	4.6	110	3.4	5.2	2.8
14	355	9.9	225	4.5	110	3.3	4.6	2.85
15	335	10.0	220	4.4	110	3.2	5.2	2.9
16	320	9.4	235	4.3	110	3.0	6.2	3.0
17	300	9.6	230	4.0	115	2.6	5.4	3.15
18	275	9.2	240	3.5	125	2.0	>5.0	3.1
19	250	9.0					4.8	3.3
20	230	7.0					5.8	3.3
21	245	5.7					4.2	3.1
22	290	5.1					3.8	2.85
23	305	4.8					4.0	2.85

Time: 75.0°E.

Sweep: 0.6 Mc to 25.0 Mc in 5 minutes, automatic operation.

Table 47

Calcutta, India (22.9°N, 88.5°E)								June 1955
Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	290	4.8					2.1	3.0
01	250	4.3					2.2	3.1
02	250	4.0					2.1	3.2
03	250	3.8					2.1	3.1
04	260	3.2						3.1
05	250	3.2						3.1
06	240	4.8	220	3.6	110	2.0	3.1	3.1
07	270	6.5	210	4.0	100	2.2	3.8	3.0
08	300	7.0	200	4.4	100	3.0	4.2	3.0
09	330	7.5	200	4.5	100	3.3	5.0	2.9
10	350	9.5	200	4.6	100	3.5	5.3	2.8
11	350	10.4	200	4.8	100	3.6	5.3	2.85
12	350	10.9	200	4.9	100	3.7	5.2	2.75
13	340	11.2	200	4.8	100	3.6	5.0	2.85
14	330	11.5	210	4.8	100	3.5	4.9	2.95
15	300	11.4	210	4.6	100	3.4	5.0	3.1
16	300	11.0	210	4.5	100	3.1	4.8	3.05
17	290	10.5	220	4.1	100	2.8	4.8	3.05
18	270	10.1	220	3.8	105	2.2	4.2	3.2
19	240	9.5					3.6	3.4
20	220	8.2					3.2	3.45
21	220	7.0					2.6	3.5
22	240	5.5					2.2	3.1
23	260	5.1					2.2	3.1

Time: 90.0°E.

Sweep: 1.0 Mc to 13.0 Mc in 1 minute 55 seconds.

Table 48

Bombay, India (19.0°N, 73.0°E)								June 1955
Time	*	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00								
01								
02								
03								
04								
05								
06:30	270	4.8						3.35
07	300	5.4						3.1
08:30	330	6.4						2.95
09	330	6.8						2.95
10	360	7.2						2.8
11	390	8.3						2.65
12	420	9.2						2.55
13	420	10.1						2.55
14	(420)	(10.4)						(2.5)
15	(420)	(10.2)						(2.55)
16	(405)	(10.2)						(2.6)
17	(360)	(9.0)						(2.8)
18	390	9.0						2.65
19	360	8.3						2.8
20	330	7.4						2.95
21	300	6.0						3.1
22	300	5.1						3.1
23								

Time: 75.0°E.

Sweep: 1.5 Mc to 18.0 Mc in 5 minutes, manual operation.

*Height at 0.83 foF2.

Table 49

Madras, India (13.0°N, 80.2°E)

June 1955

Time	*	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00								
01								
02								
03								
04								
05								
06	300	6.1						3.1
07	330	7.5						2.95
08	390	8.0						2.65
09	420	>7.8						2.55
10	420	7.8						2.55
11	440	7.5						2.5
12	450	7.7						2.45
13	450	7.8						2.45
14	450	8.2						2.45
15	420	8.8						2.55
16	420	9.0						2.55
17	420	9.4						2.55
18	390	9.4						2.65
19	360	8.3						2.8
20	320	7.4						3.0
21	320	6.1						3.0
22	---	---						
23								

Time: 75.0°E.

Sweep: 1.5 Mc to 18.0 Mc in 5 minutes, manual operation.

*Height at 0.83 foF2.

Table 50

Tiruchy, India (10.8°N, 78.8°E)

June 1955

Time	*	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00								
01								
02								
03								
04								
05								
06	320	5.7						3.0
07	320	7.2						3.0
08	360	7.8						2.8
09	400	7.6						2.6
10	440	7.4						2.5
11	440	7.5						2.5
12	440	7.5						2.5
13	440	7.6						2.5
14	400	7.7						2.6
15	400	8.0						2.6
16	400	8.5						2.6
17	380	8.8						2.7
18	360	8.8						2.8
19	320	8.5						3.0
20	320	7.1						3.0
21	320	6.1						3.0
22								
23								

Time: 75.0°E.

Sweep: 1.5 Mc to 18.0 Mc in 5 minutes, manual operation.

*Height at 0.83 foF2.

Table 51*

Singapore, British Malaya (1.3°N, 103.8°E)

June 1955

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	260	3.7					3.6	(3.1)
01	250	3.4					3.6	(3.3)
02	240	3.2					3.6	---
03	250	2.7					2.8	---
04	230	2.6					2.8	---
05	245	(1.8)					2.9	---
06	255	3.6			180	1.4	3.0	3.2
07	(255)	6.5	235		125	2.2	3.8	3.1
08	(290)	8.4	220		120	2.8	5.7	2.9
09	320	9.2	210	4.5		3.1	5.6	2.7
10	330	10.1	200	4.5		3.3	6.0	2.5
11	340	9.6	200	4.5		3.5	5.7	(2.7)
12	355	9.2	200	4.6		3.5	6.0	2.5
13	345	9.3	200	4.6		3.4	6.2	2.5
14	330	9.2	205	4.5		3.3	6.3	2.6
15	315	9.5	210	4.4		3.1	5.6	2.7
16	280	9.4	210		115	2.8	6.0	2.8
17	250	9.3	225			2.4	5.6	2.9
18	240	8.5				1.7	4.4	3.1
19	220	8.2					4.1	3.2
20	235	7.3					4.0	3.3
21	220	5.7					3.8	3.3
22	220	4.4					3.9	(3.4)
23	260	3.6					3.6	(2.9)

Time: 105.0°E.

Sweep: 0.67 Mc to 25.0 Mc in 5 minutes.

*Average values except foF2 and fEs, which are median values.

Table 52

Townsville, Australia (19.3°S, 146.7°E)

June 1955

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	240	(3.0)					2.0	---
01	240	---					2.1	---
02	240	(3.3)					2.1	---
03	230	3.4					2.1	(3.5)
04	225	2.8					2.0	(3.25)
05	230	2.8					2.1	3.2
06	240	3.0					2.1	3.4
07	230	4.7			140	1.8	2.1	3.6
08	235	6.0	230	3.6	100	2.3	3.1	3.6
09	240	6.5	200	4.0	100	2.8	4.1	3.6
10	250	6.7	210	4.3	100	3.1	3.6	3.6
11	260	6.6	210	4.4	100	3.2	3.5	3.5
12	265	6.5	210	4.4	100	3.3	3.5	3.5
13	265	6.5	205	4.4	100	3.2	4.3	3.4
14	260	6.5	200	4.3	100	3.1	4.6	3.5
15	250	6.4	210	4.0	100	3.0	4.3	3.5
16	250	6.4	210	3.6	100	2.6	4.3	3.5
17	230	5.9	---	---	---	2.0	4.3	3.6
18	220	5.2					3.7	3.4
19	220	4.3					3.1	3.55
20	220	3.3					3.1	3.1
21	250	3.3					2.1	3.2
22	240	3.2					1.8	(3.15)
23	250	(3.2)					2.0	(3.0)

Time: 150.0°E.

Sweep: 1.0 Mc to 16.0 Mc in 1 minute 55 seconds.

Table 53

Brisbane, Australia (27.5°S, 153.0°E)

June 1955

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	250	3.6						3.0
01	260	4.0						3.0
02	250	4.0						(3.05)
03	250	(3.9)						(3.1)
04	240	(4.0)						(3.2)
05	230	3.4						3.1
06	240	3.5						(3.1)
07	225	5.1						3.5
08	230	5.6	---	---	120	2.1		3.5
09	250	6.1	230	4.0	120	2.8		3.5
10	250	6.3	220	4.2	120	3.0		3.5
11	260	6.2	200	4.2	120	3.0	4.0	3.4
12	260	6.3	220	4.2	120	3.0	4.2	3.5
13	255	6.4	210	4.2	120	3.0	4.2	3.4
14	250	6.5	200	4.0	---	---	4.2	3.4
15	250	6.6	220	3.8	---	---	4.3	3.5
16	230	6.2	---	---	---	---	(4.2)	3.5
17	220	5.4			---		3.8	3.4
18	230	4.3				E	3.1	3.3
19	250	3.7						3.1
20	245	3.7						3.2
21	250	(3.5)						(3.0)
22	250	3.8						(3.0)
23	250	(3.7)						(3.0)

Time: 150.0°E.

Sweep: 1.0 Mc to 16.0 Mc in 1 minute 55 seconds.

Table 54

Canberra, Australia (35.3°S, 149.0°E)

June 1955

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	---	3.3						3.1
01	---	3.4						3.1
02	---	3.6						3.1
03	---	3.6						3.0
04	---	3.7						3.2
05	---	3.8						3.45
06	---	3.3						3.4
07	(210)	3.6			---	---		3.5
08	210	5.0	---	---	---	2.1		3.7
09	230	5.7	220	---	100	2.5		3.7
10	250	6.0	210	(4.0)	110	2.8		3.6
11	240	6.0	200	(4.1)	100	3.0		3.6
12	240	6.0	210	(4.1)	100	3.0	3.4	3.5
13	250	6.1	200	(4.1)	100	3.0	3.4	3.6
14	250	6.5	200	4.0	110	2.8	3.4	3.6
15	230	6.6	220	(3.6)	100	2.5	2.8	3.6
16	210	5.8	---	---	---	2.0	2.4	3.5
17	210	5.3						3.5
18	---	4.1					2.7	3.4
19	---	3.5						3.4
20	---	3.4						3.3
21	---	(3.2)						(3.2)
22	---	3.4						3.25
23	---	3.4						3.2

Time: 150.0°E.

Sweep: 1.0 Mc to 16.0 Mc in 1 minute 55 seconds.

Table 55

Hobart, Tasmania (42.9°S, 147.3°E)								June 1955
Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	270	2.0						3.0
01	280	2.0						3.0
02	280	2.0						2.95
03	270	2.1						2.9
04	260	2.2						3.0
05	260	2.0						3.0
06	250	2.0						3.1
07	280	2.0						3.0
08	230	4.0			100	1.7		3.2
09	220	5.0			100	2.1		3.3
10	210	5.5			100	2.5		3.3
11	200	5.8			100	2.6		3.3
12	200	6.0			100	2.7	3.1	3.2
13	210	6.1			100	2.6	3.1	3.2
14	220	6.3			100	2.5	3.0	3.3
15	220	6.3			100	2.3		3.2
16	220	6.0			100	1.9		3.2
17	210	5.2						3.2
18	220	4.2						3.1
19	250	3.0						3.0
20	250	2.4						3.1
21	270	2.0						3.1
22	280	2.0						3.0
23	280	2.0						3.0

Time: 150.0°E.

Sweep: 1.0 Mc to 13.0 Mc in 1 minute 55 seconds.

Table 56*

Falkland Is. (51.7°S, 57.8°W)								June 1955
Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	305	2.6					2.2	2.8
01	300	2.6					2.6	2.8
02	290	2.6					2.8	2.9
03	285	2.6					2.2	2.9
04	260	2.6					2.4	3.0
05	245	2.5					3.6	3.2
06	240	2.4					3.0	3.3
07	250	2.2			(190)	(1.1)	2.9	3.2
08	220	3.8			160	(1.7)	3.0	3.6
09	205	4.6			(135)	1.8	5.3	3.8
10	225	5.0			125	2.2	5.5	3.7
11	230	5.3	(225)		120	2.3	5.4	3.7
12	230	6.0	230	(3.4)	120	2.4	4.9	3.6
13	225	5.6	230	3.2	125	2.4	5.5	3.7
14	220	5.3			130	2.1	5.2	3.7
15	220	4.9			140	1.8	5.0	3.6
16	205	4.2			(170)	(1.6)	3.0	3.7
17	225	2.8					3.1	3.4
18	240	2.6					2.5	3.3
19	245	2.4					2.9	3.2
20	255	2.3					2.1	3.1
21	270	2.4					2.8	3.0
22	295	2.5					2.9	2.9
23	300	2.6					2.8	2.8

Time: 60.0°W.

Sweep: 0.67 Mc to 25.0 Mc in 5 minutes.

*Average values except foF2 and fEs, which are median values.

Table 57*

Port Lockroy (64.8°S, 63.5°W)								June 1955
Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	335	2.2						2.8
01	325	2.2						2.9
02	325	2.3						2.9
03	315	2.2						2.9
04	310	2.3						3.0
05	290	2.2						3.1
06	280	2.0						3.3
07	280	1.7						3.3
08	285	1.8					2.4	3.4
09	260	2.8			(155)	(1.3)	2.8	3.5
10	235	3.8			(125)	(1.5)	4.6	3.7
11	235	4.4			(120)	(1.8)	3.2	3.8
12	235	4.4			(120)	(1.9)	1.4	3.8
13	245	4.6					3.0	3.6
14	240	4.0					3.2	3.6
15	255	3.5			(1.4)	1.6	3.4	3.4
16	265	2.8				1.5	3.4	3.4
17	285	2.4				1.4	3.3	3.3
18	290	1.8				1.2	3.2	3.2
19	300	1.8				1.3	3.1	3.1
20	330	1.7				1.4	2.9	2.9
21	345	1.8					1.3	2.8
22	345	2.0						2.8
23	350	2.2						2.8

Time: 60.0°W.

Sweep: 0.67 Mc to 25.0 Mc in 5 minutes.

*Average values except foF2 and fEs, which are median values.

Table 58*

Falkland Is. (51.7°S, 57.8°W)								May 1955
Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	300	2.8					2.6	2.9
01	300	2.8					2.7	2.8
02	295	2.8					2.8	2.9
03	290	2.7					2.0	2.9
04	295	2.7					1.1	3.0
05	255	2.8					3.0	3.2
06	215	2.8					3.8	3.6
07	235	2.9			185	1.3	3.0	3.4
08	215	4.4			135	1.5	3.0	3.7
09	215	5.0			120	2.1	3.8	3.8
10	215	5.2	225		110	2.3	5.3	3.7
11	220	5.8	215		110	2.5	5.1	3.6
12	225	6.0	220	3.6	110	2.6	3.8	3.7
13	220	5.6	215	(3.5)	115	2.5	3.3	3.9
14	220	5.2	200		120	2.3	4.9	3.7
15	230	5.3			130	2.0	4.9	3.7
16	210	4.8				1.7	3.0	3.7
17	220	3.4					3.1	3.4
18	240	2.9					2.9	3.2
19	245	2.7					2.8	3.4
20	265	2.4					2.0	3.1
21	275	2.5					2.4	3.1
22	285	2.6					1.7	2.9
23	290	2.7					2.4	2.9

Time: 60.0°W.

Sweep: 0.67 Mc to 25.0 Mc in 5 minutes.

*Average values except foF2 and fEs, which are median values.

Table 59*

Port Lockroy (64.8°S, 63.5°W)								May 1955
Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	290	2.3						2.9
01	290	2.4					1.2	2.9
02	290	2.3						2.9
03	280	2.4						2.9
04	280	2.3					1.0	3.1
05	265	2.3					1.3	3.1
06	250	2.2						3.2
07	225	2.2						3.7
08	230	2.2			(1.1)	2.3	3.4	3.4
09	225	3.6	(210)	(2.1)	(1.3)	2.6	3.7	3.7
10	220	4.3	(210)	(2.5)	(125)	1.7	2.0	3.7
11	215	4.7	(210)	(2.7)	(110)	1.9		3.7
12	225	4.8	(210)	(2.7)	130	1.9		3.7
13	220	4.9	(210)	(2.7)	128	2.0		3.7
14	220	4.6				1.7	3.7	3.7
15	230	4.2			(150)	1.6	1.4	3.7
16	235	3.6				1.4	3.4	3.4
17	230	3.2				1.5	3.4	3.4
18	240	2.7				1.2	3.2	3.2
19	250	2.4				1.2		3.2
20	270	1.8					3.1	3.1
21	295	2.0					2.9	2.9
22	300	2.0					2.8	2.8
23	300	2.2						2.8

Time: 60.0°W.

Sweep: 0.67 Mc to 25.0 Mc in 5 minutes.

*Average values except foF2 and fEs, which are median values.

Table 60

Campbell I. (52.5°S, 169.2°E)								June 1951
Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00								
01								
02								
03								
04								
05	260	2.3					2.0	2.9
06								
07	270	2.9			---	E	1.8	2.9
08	230	4.9	---	---	130	2.0	2.0	3.3
09	240	5.7	230	---	130	2.3	2.1	3.4
10	240	6.2	230	---	130	2.5	2.2	3.35
11	240	6.8	230	3.5	130	2.6	2.2	3.35
12	250	6.7	230	3.7	130	2.6	2.2	3.4
13	240	6.8	230	3.6	130	2.6	2.4	3.3
14	240	7.0	230	---	130	2.4	2.3	3.3
15	240	7.1	220	---	130	2.0		3.3
16	220	6.4	220	---	130	1.4		3.3
17	220	5.4			---	E		3.1
18	240	4.1						3.0
19	250	3.2						2.9
20								
21	280	3.0						2.9
22								
23	300	2.9						2.75

Time: 165.0°E.

Sweep: 1.0 Mc to 15.0 Mc in 5 minutes, manual operation.

TABLE 61
Central Radio Propagation Laboratory, National Bureau of Standards, Washington 25, D. C.

IONOSPHERIC DATA

h'F₂ (Characteristic) Km January 1956
(Unit) (Month)
Observed at Washington, D. C.

National Bureau of Standards
(Institution)
Scaled by: K.B., F.M., L.M., R.M.

Calculated by: J.P., J.S., J.W., E.W.

Lat 38.7°N, Long 77.1°W

75°W Mean Time

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	230	270	260	260	260	280	260	240	230	230	(240) ^L	240	240	250	260	240	240	240	210	210	230	240	220	240
2	250	(240) ^S	280	260	250	210	260	250	220	230	230	230	250	240	250	230	230	220	240	210	220	230	250	270
3	280	270	280	250	250	220	250	250	210	220	L	250	250	260	240	250	240	210	230	220	220	250	250	270
4	280	280	270	250	270	230	240	250	210	210	230	250	240	240	250	250	220	210	240	220	220	240	260	290
5	280	280	300	280	250	240	230	240	210	220	230	220	250	260	240	250	230	210	210	210	240	280	290	280
6	270	270	260	250	260	270	240	230	240	220	260	250	250	250	250	240	240	220	230	220	220	240	250	250
7	260	240	240	270	250	240	240	230	230	230	210	240	250	250	250	230	230	230	220	210	220	260	250	F
8	(300) ^S	(300) ^S	280	270	250	250	230	220	220	220	230	240	230	270	240	250	220	200	230	220	250	240	270	290
9	(320) ^S	280	270	250	230	240	(270) ^S	270	220	220	240	230	240	250	250	240	240	220	200	210	210	270	280	(280) ^S
10	260	300	300	270	270	240	A	270	230	220	250	230	L	260	250	230	210	240	210	250	250	250	320	260
11	260	270 ^F	260	250	270	240	250	280	230	240	260	260	250	250	240	240	240	220	220	240	220	250	280	270
12	240	A	270	260	270	(280) ^S	230 ^F	230 ^F	230	250	240	240	250	260	260	L	230	210	210	230	220	280	270	250
13	240	340	290	250	250	250	240	250	210	220	250	230	250	240	240	230	230	220	210	220	230	260	270	240
14	270	270	280	250	240	240	240	230	220	220	230	220	240	240	240	260	220	210	220	220	220	250	300	(240) ^S
15	280	280	250	240	240	260	280	250	220	220	220	250	240	240	240	250	230	220	220	220	230	260	260	260
16	270	260	250	260	250	260	250	240	210	220 ^H	250	250	230	240	(240) ^L	240	240	220	210	230	230	230	(300) ^A	(240) ^A
17	(270) ^A	270	300	270	250	240	240	240	220	240	(240) ^L	240	240	240	260	250	240	230	220	230	210	250	280	300
18	300	290	230	220	240	270	300	270	220	230	(250) ^L	240	240	240	250	240	L	240	230	220	230	(220) ^A	250	310
19	330	(290) ^S	290	260	250	260	300	(290) ^A	260	260	250	260	240	240	260	250	230	220	230	230	(240) ^A	(250) ^A	(250) ^A	(230) ^A
20	(290) ^S	(300) ^S	(300) ^S	(290) ^S	260 ^F	(240) ^S	(260) ^S	(240) ^S	220	220	250	240	240	250	L	260	220	230	220	220	230	250	260	(290) ^C
21	(300) ^S	300	300	280	250	250	260	220	220	(210) ^H	250	250	240	240	240	250	230	220	230	230	250	250	290	280
22	(310) ^S	300	260	250	230	240	230	270	230	230	230	230	250	240	250	240	230	220	210	210	220	(230) ^S	270	260
23	280	260	270	270	270	270	230	250	220	220	230	230	250	240	240	240	240	230	220	210	220	210	250	(250) ^S
24	(300) ^A	(350) ^S	A	(300) ^A	270	240	(250) ^S	(270) ^S	230	230	260	260	250	250	250	270	230	220	225	210	270	(300) ^S	(330) ^S	(300) ^S
25	(260) ^S	260	(270) ^S	250	250	240	250	240	230	230	230	270	250	240	240	240	230	220	210	210	210	220	240	(270) ^S
26	300	(290) ^S	280	250	230	230	240 ^F	230	210	210	230	240	230	240	(230) ^L	(230) ^L	230	220	200	220	210	220	(250) ^S	(250) ^S
27	(290) ^S	(300) ^S	(300) ^S	280	250	230	(240) ^S	250	220	220	230	240	250	260	260	260	260	210	220	220	230	260	(300) ^A	(320) ^S
28	(350) ^S	(320) ^S	250	230	220	(300) ^S	(320) ^S	250	230	220	260	230	230	220	240	240	230	230	220	210	210	210	(260) ^S	250
29	(300) ^S	320	280	240	220	270 ^F	270 ^F	(240) ^S	210	210	(220) ^L	230	270	240	250	230	220	220	210	200	220	250	240	(250) ^S
30	260	270	250	220	220	(250) ^S	(270) ^S	230	210	210	230	250	240	250	240	240	230	220	230	220	240	230	(270) ^A	(250) ^A
31	(270) ^A	250	260	240	250	(270) ^S	(270) ^S	260	210	250	260	240	240	(250) ^C	240	250	230	220	210	220	230	(260) ^S	(240) ^S	(280) ^S
Median	280	290	280	250	250	240	250	250	220	220	240	240	240	250	240	240	230	220	220	220	220	250	270	270
Count	31	30	29	31	31	31	30	31	31	31	30	31	30	31	30	29	31	31	31	31	31	31	31	31

Sweep 10 Mc to 25.0 Mc in 15 sec.

Manual ☐ Automatic ☒

TABLE 62
Central Radio Propagation Laboratory, National Bureau of Standards, Washington 25, D. C.

IONOSPHERIC DATA

National Bureau of Standards
(Institution)
Scoted by: K.B., L.M., F.M., R.M.
Calculated by: J.P., J.S., J.W., E.W.

foF2, Mc January, 1956
(Characteristic) (Unit) (Month)
Observed at Washington, D. C.
Lat. 38.7°N, Long. 77.1°W

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	3.9	4.1	3.9	4.1	3.7	3.7	3.6	4.1	6.7	7.6	8.2	9.7	8.6	8.6	8.9	10.4	8.0	7.7	7.3	6.3	5.2	(5.4) ⁵	4.2	4.0
2	3.5	(3.2) ^F	(3.5) ^F	4.1	4.2	3.4	2.9	(3.3) ^F	6.3	8.2	9.0	8.8	9.1	9.2	9.7	9.4	10.0	8.3	8.0	6.6	(4.5) ⁵	3.7	3.7	3.6
3	3.5	3.6	4.0	3.9	3.8	3.5	(3.0) ⁵	(3.4) ⁵	5.8	7.4	7.8	9.6	9.6	9.5	9.4	10.0	9.1	8.0	8.0	7.0	4.4	3.5	3.5	3.1
4	3.4	3.6	3.7	4.0	3.5	3.5	3.2	3.3	6.4	7.2	8.3	9.4	9.9	9.5	9.2	9.4	9.7	8.0	8.0	6.0	4.6	3.4	3.5	2.9
5	2.9	3.2	3.0	3.4	4.2	4.2	3.9	3.6	5.8	7.1	8.8	9.2	9.8	9.0	8.5	9.4	9.2	7.5	7.6	5.4	3.7	3.3	3.5	3.3
6	3.5	3.6	3.7	3.6	3.3	3.2	3.5	3.4	5.8	7.1	8.5	9.2	9.0	9.5	10.5	10.0	8.9	8.0	7.0	6.5	4.9	3.5	3.7	3.3
7	2.9	2.3	2.8	3.0	3.2	3.5	3.5	3.3	6.2	6.9	8.4	8.5	9.1	9.2	10.2	9.4	9.0	8.0	8.0	6.3	3.7	3.2	3.0	2.8
8	2.3	(2.3) ⁵	2.7	2.8	3.4	3.5	3.8	3.8	6.3	7.1	7.6	8.4	9.0	8.4	8.7	9.2	8.4	6.4	6.2	5.7	3.9	3.5	3.1	(3.1) ^F
9	2.8	3.2	3.8	3.7	3.9	3.3	2.9	3.2	5.3	7.1	9.8	9.4	9.8	9.0	8.6	9.0	9.0	9.0	7.6	7.0	4.2	3.0	2.9	2.8
10	2.2	2.2	2.3	2.4	3.1	2.6	A	4.5	5.7	7.4	9.3	9.2	10.0	10.4	11.0	10.6	9.3	9.0	8.3	5.8	5.2	4.7	3.2	4.5
11	4.2	4.4	4.3	3.6	2.5	(2.2) ⁵	3.1	3.2	5.8	8.6	9.0	10.7	10.8	9.6	9.4	9.6	8.9	8.8	6.8	5.3	3.9	3.2	2.9	2.9
12	2.8	2.8	2.5	2.3	2.4	2.2	2.0	2.5	5.8	7.1	7.6	9.6	9.0	9.1	(10.5) ⁵	(10.2) ⁵	10.6	9.2	8.8	7.0	5.0	3.9	3.6	2.8
13	(2.6) ⁵	(2.3) ⁵	2.7	3.0	3.0	3.0	3.0	3.2	6.8	7.4	8.8	8.9	10.6	9.8	9.0	9.4	9.6	9.2	6.2	5.1	3.9	3.4	3.5	3.2
14	3.0	3.3	3.4	3.9	3.8	3.7	3.6	4.0	6.7	7.6	8.5	9.4	10.3	9.4	8.6	9.4	9.1	7.4	6.2	5.4	3.5	3.0	2.6	2.6
15	2.7	2.8	2.9	2.9	2.9	2.7	2.7	3.7	6.5	8.0	8.6	10.5	10.7	9.8	8.0	9.9	9.2	7.6	6.0	5.5	4.3	3.4	3.1	2.9
16	2.9	2.9	3.0	3.1	3.5	3.6	3.2	4.1	5.6	7.4	9.1	10.4	9.7	9.0	8.6	9.1	8.7	7.2	6.5	5.7	4.4	3.2	3.0	3.0
17	2.9	2.8	3.1	3.5	3.6	3.6	3.4	3.6	6.1	7.8	8.8	10.0	9.8	10.0	10.1	9.8	8.8	8.6	8.4	7.0	5.0	3.8	3.6	3.9
18	4.3	4.8	5.3	3.9	3.5	2.8	2.3	3.4	6.7	8.3	10.4	9.8	9.8	9.7	11.0	(9.3) ⁵	(9.8) ⁵	10.4	8.9	7.8	6.2	5.2	3.6	3.0
19	2.9	2.7	3.0	(3.2) ⁵	3.1	(2.2) ⁵	2.5	3.1	6.6	(8.1) ⁵	8.8	9.4	10.3	9.8	10.3	9.5	9.2	7.4	6.9	5.4	5.2	3.9	3.4	(2.8) ⁵
20	2.2	(1.9) ^F	(1.9) ^F	(2.0) ^F	(2.3) ^F	(2.2) ^F	(2.3) ^F	(3.1) ^F	(6.2) ⁵	7.5	9.0	10.1	8.8	8.6	8.8	9.7	8.4	7.6	7.2	6.0	4.2	3.3	2.6	(2.4) ⁵
21	2.3	2.3	2.4	2.5	(3.1) ⁵	(3.1) ⁵	(3.0) ⁵	3.8	6.3	(6.6) ⁵	9.0	10.7	9.7	8.0	9.2	10.7	9.6	7.8	7.6	7.2	5.5	4.5	4.8	5.0
22	4.7	5.0	5.0	4.8	4.6	3.9	2.4	3.2	6.8	8.4	9.3	10.3	10.3	9.0	9.4	10.0	9.0	8.5	8.5	6.8	4.2	3.3	3.0	3.0
23	2.9	2.8	2.7	2.8	2.8	2.8	2.8	3.2	6.0	7.0	(8.0) ⁵	8.8	11.0	9.2	9.4	(9.4) ⁵	(9.6) ⁵	(9.3) ⁵	7.0	6.8	5.0	3.9	3.9	3.3
24	(3.0) ⁵	2.7	2.8	3.3	3.0	3.0	2.7	3.0	(5.0) ⁵	6.8	7.7	10.0	9.5	10.2	10.0	10.0	10.6	10.8	9.4	7.8	(3.2) ⁵	2.5	(2.5) ^F	2.5
25	(2.7) ⁵	(4.5) ⁵	(3.4) ⁵	(4.8) ⁵	4.7	4.0	3.2	(3.7) ⁵	7.0	8.5	8.1	10.2	10.5	10.6	9.3	9.4	9.7	8.8	8.0	6.7	5.2	3.8	3.3	2.8
26	2.7	2.9	3.0	3.6	3.5	3.1	2.6	3.2	6.5	7.6	8.0	10.2	10.0	9.4	8.4	9.2	9.0	7.8	6.6	6.2	5.2	(3.5) ⁵	3.2	2.9
27	2.8	2.6	2.6	2.8	2.9	2.5	1.9	3.2	6.2	7.1	8.4	9.4	10.5	10.5	10.2	9.8	(9.8) ⁵	10.2	9.6	8.0	4.9	4.6	4.5	(3.8) ^F
28	2.6	3.5	4.2	4.3	3.0	2.4	2.6	(3.9) ^F	6.8	9.0	10.0	11.0	9.6	9.0	9.3	8.8	8.6	7.9	9.0	7.2	6.6	4.3	3.3	3.1
29	2.8	2.8	(3.0) ^F	(3.3) ^F	(2.8) ^F	(2.3) ^F	(2.4) ^F	6.6	7.2	8.2	8.2	9.8	10.0	10.3	10.5	9.8	9.4	9.4	7.8	6.3	4.9	4.3	3.8	3.4
30	3.3	3.5	3.8	4.1	3.2	2.9	2.8	3.5	7.1	7.1	8.6	10.3	10.0	9.9	9.8	9.8	9.2	7.7	7.8	6.6	5.2	5.4	4.6	4.1
31	4.0	3.7	3.5	3.5	3.2	2.7	2.5	(3.5) ^F	(6.2) ⁵	8.2	9.6	10.1	9.7	(10.0) ⁵	10.0	9.4	9.4	8.9	8.0	7.6	5.3	4.7	4.2	4.3
Median	2.9	2.9	3.0	3.5	3.2	3.1	2.9	3.4	6.3	7.4	8.6	9.7	9.8	9.6	9.4	9.5	9.2	8.0	7.8	6.5	4.9	3.5	3.5	3.1
Count	31	31	31	31	31	31	30	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31

Sweep 1.0 Mc to 25.0 Mc in 13.5 sec.

Manual ☐ Automatic ☒

TABLE 63
Central Radio Propagation Laboratory, National Bureau of Standards, Washington 25, D. C.

IONOSPHERIC DATA

National Bureau of Standards
(Institution)
Scaled by: K.B., F.M., L.M., R.M.
Calculated by: J.P., J.S., J.W., E.W.

foF2 (Characteristics) Mc (Unit) January, 1956
Observed at Washington, D. C.
Lat 38.7°N, Long 77.1°W

Day	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130	1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330
1	4.2	4.2	4.0	3.8	3.7	3.6	3.6	4.8	7.4	8.6	9.6	9.1	9.0	8.6	10.3	9.8	8.5	8.4	6.9	5.6	5.5	5.0	4.0	3.5
2	(3.0) ^F	3.5 ^F	3.8 ^F	(4.1) ^C	3.9	3.3 ^F	(2.5) ^A	4.6	7.4	8.4	9.2	9.4	9.2	9.1	10.3	10.0	8.8	8.0	7.6	4.7	4.0	3.8	4.0	3.5
3	3.6	3.5	3.9	3.7	3.9	(3.0) ^F	(2.9) ^F	4.8	7.0	7.6	9.2	9.4	9.2	9.7	9.2	10.2 ⁵	8.4	7.6	6.9	5.2	3.7 ^F	3.4 ^F	3.1 ^F	3.5 ^F
4	3.4	3.5 ^F	3.2 ^F	3.9	3.5 ^F	3.4 ^F	2.9 ^F	5.2 ^F	6.8	8.4	8.6	9.4	9.0	9.0	9.1	10.5 ⁵	9.2	8.0	7.2	5.0	3.9 ^F	3.4 ^F	3.1 ^F	2.9 ^F
5	3.1 ^F	3.2	3.4 ^F	3.7 ^F	4.2 ^F	4.2 ^F	3.2 ^F	5.0	6.5	7.8	9.6	9.2	9.3	8.8	8.9	(9.5) ⁵	8.4	8.2	6.6 ^F	4.4 ^F	3.4	3.4 ^F	3.4 ^F	3.4 ^F
6	3.4 ^F	3.7 ^F	3.8 ^F	3.6 ^F	3.3 ^F	3.4 ^F	3.0 ^F	4.7	6.4	7.2	8.9	9.2	9.0	10.0	10.3	9.3	8.4	7.2	6.8	5.8	4.3	3.5 ^F	3.2 ^F	3.0 ^F
7	2.8 ^F	2.8 ^F	3.0 ^F	3.0 ^F	3.2 ^F	3.5 ^F	2.7 ^F	4.4	6.5	8.6	8.3	9.2	9.1	9.9	9.9	9.2	7.9	8.4	7.3	5.0	3.2 ^F	3.1 ^F	2.4 ^F	2.5 ^F
8	2.3 ⁵	2.5 ^F	2.8 ^F	3.4 ^F	3.4 ^F	3.6 ^F	3.7 ^F	5.2	7.0	7.5	8.3	8.6	7.9	8.6	9.0	9.2	7.6	6.4	6.6 ⁵	4.1 ⁵	3.8	3.1 ^F	3.1 ^F	2.7 ^F
9	2.9 ^F	3.5 ^F	3.8 ^F	3.8 ^F	3.4 ^F	3.0 ^F	2.6 ^F	4.9 ^F	7.1	8.5	10.0	9.0	8.7	8.4	9.4	9.2	8.6	8.6	7.6	5.6	3.4	2.9 ^F	2.8 ^F	2.6 ^F
10	2.1 ^F	2.2 ^F	2.4 ^F	2.6 ^F	3.0	2.2 ^F	A	4.9	7.5	7.8	10.2	10.0	10.4	[10.6] ⁵	11.0	9.4	8.4	(9.8) ⁵	6.4	5.3	4.8 ^F	3.9 ^F	3.4 ^F	4.4
11	4.4 ^F	4.3 ^F	4.2 ^F	3.0 ^F	2.9 ^F	3.0 ^F	2.3 ^F	4.5 ^F	6.3	8.4	10.0	11.7	10.0	7.9	(9.4) ⁵	9.3	[8.8] ⁶	7.5	6.0	4.8	3.6	2.9 ^F	3.0	2.7
12	[2.7] ^A	2.7 ^F	2.3 ^F	2.4 ^F	2.3 ^F	2.2 ^F	2.0 ^F	4.3 ^F	6.3	7.3	9.2	9.0	8.9	9.1	10.3	10.0	10.5	8.7	6.7	5.5	3.6	3.5 ^F	3.6	2.8
13	2.3	2.2	2.6	3.0	3.0	3.2	2.5	5.0	7.6	8.0	9.8	10.3	10.3	9.8	9.4	9.5	9.0	6.9	5.5	4.8	3.5	3.5	3.5	3.2 ^F
14	3.2 ^F	3.4 ^F	3.9 ^F	3.7 ^F	3.6	3.6	3.4	5.4	7.4	7.8	9.6	9.6	10.2	9.4	8.4	9.4	9.0	6.2	5.9	4.7	3.2	2.7	2.6	2.7
15	2.7 ^F	2.8 ^F	3.0 ^F	3.0	2.8	2.7 ^F	2.8 ^F	5.2	8.4	7.9	(9.2) ⁵	10.5	9.4	8.4	9.0	9.3	8.2	7.1	5.9	4.8	3.8	3.4	3.1	2.9
16	2.9	3.0 ^F	3.0 ^F	3.3 ^F	3.5 ^F	3.5 ^F	3.3 ^F	5.7	7.6	7.9 ^F	10.0	9.3	9.0	8.0	9.4	8.6	8.7	7.1	5.9	5.0	3.7	3.1	3.0	3.0
17	2.9	2.8	3.3	3.6	3.7 ^F	3.6 ^F	3.2 ^F	5.2	7.0	8.6	9.6	10.1	9.1	10.0	10.1	9.4	8.8	8.9	7.5	6.0	4.3	3.8	3.6	4.0
18	4.5	5.1	5.2	3.6	2.8	2.5 ^F	2.4 ^F	4.9 ^F	7.5	10.0	(12.0) ⁵	10.0	9.2	11.0	9.3	(9.8) ⁵	(10.2) ⁵	10.0	7.6	7.3	5.8	(4.5) ⁵	2.7 ^F	3.1 ^F
19	2.6 ^F	2.8 ^F	3.1 ^F	3.2 ^F	3.0 ^F	2.8 ^F	2.5 ^F	4.5 ^F	6.2 ^F	(8.4) ⁵	9.2	10.0	10.1	9.8	9.4	9.4	8.2	(7.0) ⁵	6.7	5.6	4.2	(3.7) ⁵	2.9 ^F	2.6 ^F
20	(1.9) ^F	1.9 ^F	(2.1) ^F	2.3 ^F	(2.4) ^F	(2.4) ^F	(2.2) ^F	4.5 ^F	(7.0) ⁵	8.3	9.4	9.0	8.0	8.6	9.4	9.3	7.4	7.8	6.6	5.4	3.8	3.2	2.5	0
21	[2.3] ^C	2.4	2.4 ^F	3.0	3.1 ^F	3.0	3.4 ^F	5.2	7.2	8.2	9.6	9.9	9.0	8.3	10.0	10.5	8.4	7.6	7.6	6.0 ⁵	4.8	5.0	4.8	5.1
22	4.8 ⁵	5.2	5.0	4.8	4.2	3.2	2.4	5.1	7.4	9.4	9.8	10.5	9.6	9.1	9.5	9.2	8.8	8.6	7.6	6.0 ⁵	(3.7) ⁵	3.1 ⁵	3.0 ^F	2.9 ^F
23	3.0 ^F	2.8 ^F	2.7 ^F	2.7 ^F	2.8 ^F	3.0 ^F	2.5 ^F	5.1	7.2	(7.4) ⁵	9.0	10.0	10.0	9.0	9.2	(9.4) ⁵	(9.6) ⁵	(9.3) ⁵	8.0	6.7	6.0	3.8 ^F	(3.3) ⁵	(3.7) ⁵
24	2.7 ^F	3.0 ^F	(2.9) ^F	3.0 ^F	3.0 ^F	3.1 ^F	2.4 ^F	4.4 ^F	7.1	7.3	8.6	10.0	10.0	10.0	9.8	10.1	10.9	10.2	9.5	5.8 ^F	2.4 ^F	2.8 ^F	2.5 ^F	2.3 ^F
25	(4.2) ⁵	(4.5) ⁵	(4.3) ⁵	4.5	4.3	3.7	2.9	4.9	8.4	8.4	9.6	10.6	11.4	10.2	9.3	9.6	9.2	8.6	7.2	5.8	4.6	3.5 ^F	3.0 ^F	2.8
26	2.8	2.9 ^F	3.3 ^F	3.5 ^F	3.5 ^F	2.9 ^F	2.4 ^F	5.2	7.2	7.6	9.0	10.5	9.2	9.0	9.0	8.6	8.2	7.4	6.2	6.3	(4.4) ⁵	3.2 ^F	3.1	2.8
27	2.6	2.5	2.7	2.9	2.4	2.2	2.1	4.8	7.0	7.1	9.6	9.3	10.4	10.2	10.0	9.8	12.0	10.0	9.4	6.4	4.5	4.5	4.2	(2.7) ^F
28	2.9	3.9	4.5	4.0	2.4	2.6 ^F	3.0 ⁵	5.5	9.2	8.8	10.6	9.8	9.2	9.2	9.0	8.8	8.4	8.7	7.6	6.4	5.5	3.7	3.4 ^F	(3.1) ^F
29	2.8 ^F	3.0 ^F	(3.2) ^F	(3.1) ^F	(2.2) ^F	(2.2) ^F	(2.5) ^F	5.6 ^F	(7.0) ^F	8.0	9.2	10.2	10.5	10.7	11.0	10.3	9.4	9.0	7.6	5.8	4.4	4.3	3.5	3.5
30	3.2 ^F	3.6 ^F	4.0	3.6	3.0	2.8 ^F	2.8 ^F	5.2 ^F	7.1	8.8	9.5	10.5	10.0	9.6	10.0	9.8	8.4	7.1	7.9	5.6	5.6	4.9	4.8	3.8
31	3.8 ^F	3.5 ^F	3.8 ^F	[3.4] ^C	2.8 ^F	2.7 ^F	[2.3] ^C	5.3	7.1	8.0	9.8	9.8	9.8	10.5	10.0	9.5	8.7	8.8	7.6	5.7	4.9	4.3	4.2	4.3
Median	2.9	3.0	3.3	3.4	3.1	3.0	2.6	5.0	7.1	8.0	9.6	9.8	9.3	9.6	9.4	9.4	8.1	8.2	7.2	5.6	4.0	3.6	3.1	3.0
Count	31	31	31	31	31	31	30	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	30

Sweep 1.0 Mc to 25.0 Mc in 1.35 sec.

Manual ☐ Automatic ☒

TABLE 64
Central Radio Propagation Laboratory, National Bureau of Standards, Washington 25, D. C.

IONOSPHERIC DATA

h' F1 (Characteristic) Km (Unit) January, 1956 (Month)
Observed at Washington, D. C.

Lat 38.7°N, Long 77.1°W

National Bureau of Standards
(Institution)
Scaled by: K.B., L.M., F.M., R.M.
Calculated by: J.P., J.S., J.W., E.W.

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1									Q	Q	215	220	220	215	230	220 ^H	Q							
2									Q	Q	225	215	210	210	235	215	Q							
3									Q	Q	210	230	230	210	A	A	Q							
4									Q	Q	Q	A	235	200	225	230	Q							
5									Q	200	185 ^H	195	190	200	205 ^H	210	Q							
6									Q	190 ^H	200	190 ^H	220	220	225	225	225							
7									Q	210	210	220	215	215	230	225	230							
8									Q	210	210 ^H	205	210	200	205	235	Q							
9									Q	215	235 ^H	220	210	215	230	230	230							
10									Q	Q	210	220	220	225	210	220	220							
11									Q	240	210	225	220	220	225	240	Q							
12									Q	Q	A	A	220	215 ^H	210	230	Q							
13									Q	Q	220	210	200	200	200	225	Q	Q						
14									Q	Q	215	210	220	205 ^H	220	200	Q	Q						
15									Q	Q	220	220	230	215	215	230	Q	Q						
16									Q	Q	230	220	220	210	215	240	Q							
17									Q	235	220	235	225	210	205 ^H	230	Q	Q						
18									Q	Q	225	205	210	210	215 ^H	230	235	Q						
19									Q	225 ^H	210	225	240	240	240	240	Q	Q						
20									Q	215	180	210	205	195	195	215	230	Q						
21									Q	Q	220	230	205	210	190	250	Q							
22									Q	Q	220	215	230	225	205	220	230	Q						
23									Q	Q	200 ^H	220	230	230	210	220	Q	Q						
24									Q	Q	220	210	200 ^H	220	230	240	Q	Q						
25									Q	Q	215	210	210	230	220	200	Q	Q						
26									Q	Q	210	210	220	200	200	220	230	Q						
27									Q	Q	200	220	200	210	230 ^H	240	220	Q						
28									Q	Q	200	230	200	200	210	230	Q	Q						
29									Q	220	200	210	210	210	220	210	Q	Q						
30									Q	Q	Q	210	190	210	210	230	Q							
31									Q	220	220	220	190	210 ^H	210	230	220	Q						
Median										215	210	220	215	210	215	230	230							
Count									11	28	29	31	31	31	30	30	10							

Sweep LO — Mc to 250, Mc in 13.5, 800.

Manual ☐ Automatic ☒

TABLE 66
Central Radio Propagation Laboratory, National Bureau of Standards, Washington 25, D. C.

IONOSPHERIC DATA

Observed at h'E Km January 1956
(Characteristic) (Unit) (Month)
Washington, D. C.
Lat 38.7°N, Long 77.1°W

National Bureau of Standards
(Institution)
Scored by: K.B., L.M., F.M., R.M.
Calculated by: J.P., J.S., J.W., E.W.

Calculated by: J.P., J.S., J.W., E.W.																								
75°W Mean Time																								
Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1									(135) ^S	109 ^H	103 ^H	(119) ^A	(119) ^A	(119) ^A	(119) ^A	(119) ^A	(121) ^A							
2									(139) ^S	109 ^S	109	(109) ^A	(113) ^S	A	A	A	A							
3									A	113	105 ⁻	107	107	109	109 ^H	109	A							
4									(139) ^S	109	103 ^H	109	107 ^H	109	(106) ^A	(103) ^A	A							
5									(119) ^S	A	A	109	109	109	(109) ^A	109	A							
6									S	109	109	109	110 ^H	111	105 ⁻	110	A							
7									A	101 ^H	(106) ^A	(111) ^A	(119) ^A	107	109	109 ^H	A							
8									(131) ^S	109	109	109	111	109	111	109 ^H	(125) ^S							
9									S	119	117	111	111	111	111	(111) ^A	(123) ^A							
10									A	(120) ^A	(105) ^A	111	109	111	(111) ^A	111 ^H	A							
11									131 ^H	109 ^H	109 ^H	109 ^H	105 ^H	109 ^H	109 ^H	109	111 ^H							
12									S	99	111	105	101	111	107	111	121							
13									S	105 ⁻	(113) ^A	117	101 ^H	101	109	109	109							
14									(139) ^S	109 ^H	105 ⁻	111	109 ^H	109	109	109 ^H	119							
15									A	A ^H	110 ^H	105 ⁻	111	111	111	109	A ^H	S						
16									A	109	109	(109) ^A	(111) ^A	(111) ^A	(111) ^A	(109) ^H	(111) ^A	A						
17									139	125 ⁻	A	A	111	113	113	111	121	S						
18									(121) ^S	(107) ^H	(105) ^A	107	109 ^H	109	109	(111) ^A	119	(117) ^S						
19									A	A	(123) ^A	(117) ^A	(121) ^A	(113) ^A	A	A	A							
20									A	(129) ^A	A	A	A	A	105 ⁻	A	(129) ^A	A						
21									(119) ^S	109 ^H	A	119	(119) ^A	(119) ^A	109	119 ^H	119	S						
22									131 ^H	A	A	(119) ^B	(111) ^B	(129) ^S	(109) ^A	(113) ^A	(115) ^A	S						
23									129	121	111 ^H	111	115 ⁻	111	111 ^H	115 ⁻	119	S						
24									115 ⁻	111	109	111	111	111	103	107	(120) ^A	A						
25									(135) ^S	109 ^H	105 ⁻	105 ⁻	101	101	101	(109) ^A	109	A						
26									A	(109) ^A	(101) ^H	(109) ^A	109	101	101	(100) ^A	101	A						
27									120	111	101	105 ⁻	(100) ^A	105 ⁻	105 ⁻	111	111	S						
28									S	101	101	(109) ^A	103	101	101	(101) ^A	A	S						
29									(119) ^S	109 ^H	A	A	(111) ^A	101	109	109	111	S						
30									119	A	A	109	(112) ^A	(115) ^A	111	101	115 ⁻	B						
31									A	105 ⁻	111	101	101	(110) ^F	111	(113) ^F	115 ^H	(140) ^S						
Median									(131)	109	109	109	110	109	109	109	119	—						
Count									17	25	23	27	29	27	29	28	21	2						

Sweep 10 Mc to 25.0 Mc in 13.5 sec.

Manual ☐ Automatic ☒

TABLE 67

IONOSPHERIC DATA

foE (Characteristics) _____ Mc (Unit) _____
 Observed at _____ Washington, D. C.
 National Bureau of Standards (Institution)
 Scaled by: K. B., F. M., L. M., R. M.
 Calculated by: J. P., J. S., J. W., E. W.

January, 1956
 (Month)
 38.7°N., Long 77.1°W.
 (Lat)

Calculated by: J.P. J.S. J.W. E.W.																								
75°W Mean Time																								
Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1									1.7	2.4 ^H	2.8 ^H	3.0	(31) ^A	3.1	2.9	2.4	(19) ^H							
2									1.8	(25) ^A	(28) ^A	A	A	A	A	(25) ^A	A							
3									A	2.4	2.8	3.0	3.1	3.0	2.9 ^H	A	A							
4									1.7	2.4	2.8 ^H	[3.0] ^A	3.1 ^H	3.0	[2.8] ^A	2.5 ^H	(23) ^A							
5									1.7 ^H	A	A	3.0	3.1	(31) ^A	(29) ^A	2.7	A							
6									<1.6 ^S	2.1	2.5	3.0	3.1 ^H	3.1	2.9	2.5	A							
7									A	2.5 ^H	[2.8] ^A	3.1	3.1	3.0	2.9	2.4 ^H	A							
8									1.6	2.4	(2.7) ^A	3.1	(31) ^A	3.0	2.8	2.8 ^H	2.2							
9									<1.6 ^S	2.4	2.7	2.8	3.0	(29) ^A	2.9	2.6 ^H	2.1							
10									A	2.4	2.7	3.0	3.0	3.0	(28) ^A	2.6 ^H	A							
11									2.0 ^H	2.2 ^H	2.6 ^H	2.8 ^H	[2.9] ^A	3.0 ^H	2.8	2.5	2.2 ^H							
12									<1.6 ^S	2.3	2.5	2.8	3.1	3.1	2.8	2.5	A							
13									S	2.4	[2.8] ^A	3.1	3.2 ^H	3.0	2.9	2.5	2.4	1.6						
14									2.0	2.3 ^H	2.4	[2.8] ^A	3.2 ^H	2.9	[2.8] ^A	2.7 ^H	2.2	1.6						
15									A	2.6 ^H	3.0 ^H	3.4	3.4	3.3	(30) ^A	[2.7] ^A	2.4 ^H	<1.6 ^S						
16									A	2.6	2.9	3.2	(32) ^H	(32) ^A	A	A	A	A						
17									1.8	2.5	A	A	A	A	A	A	A	<1.6 ^S						
18									1.6	(2.6) ^A	(3.0) ^A	3.2	(32) ^H	A	A	A	2.3	(18) ^P						
19									A	(2.9) ^A	(3.1) ^H	(3.3) ^A	(3.2) ^A	(3.0) ^A	A	A	A							
20									A	(2.4) ^A	A	A	(3.1) ^A	3.1	3.0	A	2.5	A						
21									1.8	2.4 ^H	3.0	3.2	3.3	3.1	3.0	3.0 ^H	2.6	<1.6 ^S						
22									1.9 ^H	A	A	A	3.2	3.3	3.1	A	A	<1.6 ^S						
23									2.0	[2.5] ^A	3.0 ^H	3.4	3.4	3.3	3.1 ^H	[2.8] ^A	2.5 ^F	1.9						
24									(2.1) ^F	2.6	2.8	3.1	3.2	3.2	3.1	2.9	2.5	A						
25									2.1 ^H	2.8 ^H	2.6	2.9	(3.2) ^A	3.2	[3.0] ^A	2.9	A							
26									A	A	A	A	3.4	3.4	3.1	[2.8] ^A	2.5	1.7						
27									1.9	2.5	2.8	3.1	3.2	3.1	2.9	2.8	2.5	<1.7 ^S						
28									A	2.5	2.8	3.1	3.2	3.1	3.0	[2.8] ^A	2.5	<1.6 ^S						
29									2.0	2.5 ^H	A	A	3.1	3.1	2.9	2.7	2.2	<1.6 ^S						
30									R	A	A	3.1	[3.1] ^A	3.1	3.0	2.8	2.4	B						
31									A	2.5	3.0	3.1	3.1	[3.1] ^C	3.1	[2.8] ^C	2.4 ^H	2.0						
Median									1.8	2.4	2.8	3.1	3.1	3.1	2.9	2.7	2.4	1.6						
Count									17	26	24	25	29	28	27	24	19	13						

Sweep 10 Mc to 25.0 Mc in 13.5 sec.
 Manual ☐ Automatic ☒

TABLE 68
Central Radio Propagation Laboratory, National Bureau of Standards, Washington 25, D. C.

IONOSPHERIC DATA

National Bureau of Standards
(Institution)
Scaled by: K.B., L.M., F.M., R.M.
Calculated by: J.E., J.S., J.W., E.W.

E_s (Characteristic) _____ Mc (Unit) _____ January, 1956
Observed at _____ Washington, D. C.

Lot 38.7°N, Long 77.1°W

75°W Mean Time

Day	Morning										Afternoon										Evening			
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	<1.6 ^s	<1.6 ^s	<1.6 ^s	<1.6 ^s	2.8	1.2	<1.6 ^s	1.9	G	G	2.7	4.6	3.7	2.3	2.3	2.3	4.2	3.0	3.0	<1.6 ^s	2.5	3.1	2.9	
2	<1.5 ^s	2.1	<1.2 ^s	S	2.2	3.4 ^y	2.9	4.3 ^y	3.0 ^y	4.3 ^y	3.5 ^y	3.6	4.2	3.1 ^H	2.9	3.1 ^y	2.4 ^H	1.9	<1.6 ^s	<1.4 ^s	<1.6 ^s	<1.6 ^s	<1.5 ^s	<1.6 ^s
3	1.8	3.4	2.1 ^F	2.1	2.2 ^H	2.2	6.6 ^y	<1.6 ^s	2.9 ^y	3.1 ^y	4.1	6.6 ^y	7.4	4.4	5.7	1.0	7.0 ^y	3.0	3.0	2.0	<1.5 ^s	<1.6 ^s	2.1	4.2
4	2.2	2.2	1.2 ^F	4.6 ^y	2.1	3.7	4.3	3.5	3.0	4.2	5.0	5.0	3.6 ^H	3.0 ^y	3.8 ^H	3.9 ^H	3.7 ^H	3.7	3.4	3.0	1.9	<1.6 ^s	6.6 ^y	4.3
5	2.0	4.6	4.4 ^F	3.7	<1.3 ^s	<1.6 ^s	6.6 ^y	<1.6 ^s	3.8 ^y	3.1	3.1	4.1	4.9 ^y	4.4 ^y	3.8 ^y	4.4 ^y	2.2	<1.6 ^s	<1.6 ^s	2.7 ^y	<1.6 ^s	<1.6 ^s	<1.6 ^s	3.7 ^y
6	3.5 ^y	<1.6 ^s	3.7 ^y	4.1 ^y	<1.6 ^s	3.8 ^y	1.8 ^s	<1.6 ^s	4.2 ^y	2.9	2.9	4.9	4.4	2.3	4.6	3.6	3.9 ^F	<1.6 ^s	3.0	1.7	<1.5 ^s	<1.6 ^s	<1.6 ^s	<1.6 ^s
7	<1.5 ^s	2.2	3.5	2.0	3.7	<1.3 ^s	7.8	4.3	2.7	4.0 ^H	3.5 ^H	3.6	3.6	3.2	4.9	4.2	4.2	3.1	2.8	<1.6 ^s	<1.5 ^s	2.6	4.5	
8	3.8	<1.5 ^s	<1.4 ^s	<1.3 ^s	3.5	3.7	2.0	2.9	4.0	<1.6 ^s	3.3	8.2 ^y	3.2	<1.6 ^s	<1.8 ^s	<1.6 ^s	<1.6 ^s	<1.6 ^s	<1.3 ^s	<1.6 ^s	<1.6 ^s	<1.5 ^s	<1.6 ^s	5.5
9	<1.4 ^s	<1.2 ^s	<1.2 ^s	E	E	E	1.7	<1.6 ^s	<1.6 ^s	2.5	<1.8 ^s	3.1	3.1	3.1	2.8	2.4	1.8	1.9	<1.6 ^s	E	1.9	2.9 ^y	<1.5 ^s	<1.4 ^s
10	E	<1.2 ^s	E	E	6.2	4.6	1.5 ^o	9.6	5.1	2.1	2.4	2.3	G	G	3.3	3.0	2.9	3.2	3.9	1.6	<1.6 ^s	<1.6 ^s	<1.2 ^s	<1.5 ^s
11	<1.6 ^s	<1.5 ^s	<1.3 ^s	3.0 ^s	4.0	E	<1.5 ^s	<1.6 ^s	G	G	G	G	2.9 ^H	G	G	G	G	<1.6 ^s	<1.6 ^s	<1.5 ^s	<1.5 ^s	<1.8 ^s	<1.6 ^s	<1.8 ^s
12	4.5	5.5	4.5	<1.1 ^s	<1.2 ^s	<1.2 ^s	E	<1.6 ^s	4.0 ^y	4.3 ^H	3.9	4.3	3.6	4.3	3.3	3.8	2.4	G	<1.5 ^s	<1.5 ^s	<1.6 ^s	<1.6 ^s	<1.6 ^s	<1.6 ^s
13	<1.5 ^s	<1.6 ^s	<1.6 ^s	<1.3 ^s	<1.2 ^s	<1.5 ^s	<1.6 ^s	<1.6 ^s	G	G	6.8	4.0	G	3.1	G	2.6	5.5	G	<1.5 ^s	<1.2 ^s	<1.5 ^s	<1.5 ^s	<1.6 ^s	<1.6 ^s
14	<1.5 ^s	<1.5 ^s	1.6	E	<1.2 ^s	<1.3 ^s	<1.6 ^s	<1.5 ^s	1.8 ^F	3.5	8.6	3.3 ^F	G	3.1	7.6	G	G	<1.5 ^s	<1.5 ^s	<1.5 ^s	<1.6 ^s	<1.6 ^s	<1.5 ^s	2.1
15	<1.6 ^s	<1.6 ^s	<1.1 ^s	E	E	1.6	1.5	1.7	4.2	3.8	4.2	3.6	9.0	G	3.1	2.7	3.3	<1.6 ^s	3.7	<1.5 ^s	2.3	<1.6 ^s	<1.6 ^s	2.5
16	<1.5 ^s	<1.5 ^s	<1.1 ^s	<1.1 ^s	E	<1.1 ^s	<1.6 ^s	<1.6 ^s	2.0	2.9	4.3	4.5	3.6	4.3	3.1	2.8	4.3	3.3	<1.6 ^s	2.8	<1.6 ^s	4.9	7.4	7.6
17	4.9	3.9	1.0 ^s	4.3	3.3	2.8	<1.4 ^s	4.4	2.3	2.9	4.4	7.3	5.0 ^H	3.4	3.1	3.2	4.5	<1.6 ^s	E	4.4	3.5	<1.6 ^s	<1.6 ^s	<1.6 ^s
18	<1.5 ^s	<1.5 ^s	E	<1.1 ^s	E	E	<1.4 ^s	<1.6 ^s	4.4	6.6 ^y	3.1	G	G	3.2	4.0 ^y	4.0	G	G	2.9 ^y	1.7	4.7	4.9	2.4	3.0
19	<1.5 ^s	E	<1.3 ^s	<1.1 ^s	5.8 ^F	4.9	6.4	4.5	4.5	4.1 ^H	3.1	2.7	7.0 ^y	3.0	3.7	2.1	2.7	2.4 ^H	4.0	3.3	4.5	4.1	8.0 ^H	4.2
20	2.8	<1.5 ^s	<1.3 ^s	<1.1 ^s	<1.1 ^s	<1.2 ^s	<1.6 ^s	<1.6 ^s	2.0 ^H	2.7 ^H	6.2 ^H	5.8 ^L	4.4 ^L	2.8	1.8	5.1 ^L	3.3	2.4	3.4	1.7	3.0	4.8	<1.6 ^s	C
21	<1.7 ^s	<1.5 ^s	1.8	3.0	2.5	<1.6 ^s	2.6	<1.6 ^s	2.2	G	3.7	3.7	2.9	3.3	G	G	G	G	3.1	<1.5 ^s	<1.5 ^s	<1.5 ^s	<1.6 ^s	<1.5 ^s
22	<1.3 ^s	<1.6 ^s	<1.4 ^s	E	E	E	E	<1.6 ^s	2.2	5.4 ^H	5.0	3.2	G	3.0	3.2	3.3	2.5	G	<1.5 ^s	<1.5 ^s	<1.6 ^s	<1.6 ^s	<1.6 ^s	<1.4 ^s
23	3.0 ^y	<1.2 ^s	<1.2 ^s	<1.1 ^s	1.4	2.8 ^y	<1.6 ^s	<1.5 ^s	<1.6 ^s	2.9 ^H	G	3.4	3.6	3.4	3.3	2.9	2.9 ^H	<1.6 ^s	<1.6 ^s	<1.1 ^s	<1.5 ^s	<1.6 ^s	<1.6 ^s	<1.6 ^s
24	7.0	3.6	4.2	2.8 ^y	<1.2 ^s	<1.3 ^s	<1.6 ^s	<1.6 ^s	2.2 ^F	G	3.0	3.2	3.2	G	G	G	2.1	3.2 ^F	3.2 ^F	<1.5 ^s	<1.5 ^s	<1.6 ^s	<1.5 ^s	<1.5 ^s
25	<1.4 ^s	<1.4 ^s	<1.5 ^s	<1.2 ^s	<1.2 ^s	<1.3 ^s	<1.5 ^s	<1.5 ^s	G	G	3.3 ^H	3.6	3.3	4.8	2.8	3.9	3.9	2.6	<1.6 ^s	<1.5 ^s	<1.6 ^s	<1.5 ^s	<1.6 ^s	<1.6 ^s
26	1.9	3.3	<1.5 ^s	<1.2 ^s	<1.2 ^s	<1.3 ^s	<1.6 ^s	<1.6 ^s	2.4	3.4	4.6	4.7	3.7	3.5	3.2	3.9	3.5	2.5 ^y	<1.6 ^s	<1.6 ^s	<1.6 ^s	<1.6 ^s	<1.6 ^s	<1.6 ^s
27	<1.6 ^s	<1.6 ^s	<1.6 ^s	<1.2 ^s	<1.2 ^s	<1.6 ^s	<1.6 ^s	<1.6 ^s	G	3.6	G	G	7.4 ^y	G	G	3.8 ^y	G	<1.7 ^s	<1.6 ^s	<1.6 ^s	<1.6 ^s	<1.6 ^s	<1.6 ^s	<1.5 ^s
28	<1.6 ^s	<1.6 ^s	<1.6 ^s	<1.3 ^s	<1.2 ^s	<1.4 ^s	<1.6 ^s	<1.6 ^s	3.7 ^y	G	2.9	2.4	2.4	G	3.1	2.9	2.3	G	<1.6 ^s	<1.5 ^s	<1.6 ^s	<1.6 ^s	3.1	5.0
29	3.1 ^y	<1.6 ^s	4.1	E	<1.4 ^s	2.4	<1.3 ^s	<1.6 ^s	2.1	2.7	3.9	4.0	3.3	3.2	3.1	3.2	3.3	2.3	1.9	<1.6 ^s	<1.6 ^s	<1.6 ^s	<1.6 ^s	<1.6 ^s
30	<1.5 ^s	<1.2 ^s	E	E	E	2.6 ^y	<1.6 ^s	<1.6 ^s	2.3	3.5 ^y	3.5 ^y	3.6	3.6	3.3	2.2	G	G	2.0	2.1 ^y	3.3 ^y	1.7	3.0 ^y	3.3	3.8
31	3.7	<1.3 ^s	<1.2 ^s	E	E	<1.5 ^s	2.5	3.1	3.8	G	G	G	G	C	G	C	2.4	G	2.4 ^y	<1.6 ^s	2.4	<1.6 ^s	2.4	3.3 ^y
Median	<1.6	<1.6	<1.5	<1.2	<1.2	<1.6	<1.6	<1.6	2.3	2.9	3.5	3.6	3.6	3.1	3.1	3.0	2.5	<1.7	<1.6	<1.6	<1.6	<1.6	<1.6	<1.7
Count	31	31	31	30	31	31	31	31	31	31	31	31	31	30	31	30	31	31	31	31	31	31	31	30

Sweep 1.0 Mc to 25.0 Mc in 13.5 sec.

Manual ☐ Automatic ☒

TABLE 69
Central Radio Propagation Laboratory, National Bureau of Standards, Washington 25, D. C.

Observed of (M3000)F2 (Characteristic) January 1956 (Month)
Washington, D. C. (Unit)
National Bureau of Standards (Institution)
Scaled by: K.B., F.M., L.M., R.M.
Calculated by: J.P., J.S., J.W., E.W.

IONOSPHERIC DATA

Day	75°W												Mean Time											
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	2.70	3.10	3.00	3.00	2.70	2.90	2.90	3.20	3.40	3.30	3.20	3.20	3.20	3.00	3.05	3.30	3.20	3.10	3.20	3.10	3.00	(3.20)	3.05	3.15
2	3.10	(3.10)	(3.00)	2.95	3.10	3.30	(3.30)	(3.20)	3.45	3.50	3.40	3.30	3.35	3.10	3.15	3.20	3.30	3.30	(3.15)	3.50	(3.30)	3.20	3.05	3.00
3	2.90	3.05	2.95	3.00	3.00	(3.40)	(3.40)	(3.15)	3.60	3.55	3.20	3.30	3.20	3.10	3.10	3.30	3.25	3.20	3.30	3.25	3.30	3.00	3.00	3.05
4	3.00	2.70	2.90	3.00	(3.00)	3.40	3.15	3.30	3.50	3.40	3.50	3.30	3.25	3.20	2.75	3.20	3.20	3.25	3.20	3.40	3.40	3.20	3.00	3.05
5	2.70	3.00	3.00	3.00	3.10	3.30	3.25	3.15	3.40	3.40	3.30	3.40	3.45	3.30	3.30	3.30	3.40	3.15	3.30	3.50	3.20	3.00	3.00	(3.00)
6	3.05	3.15	3.25	3.25	3.10	3.10	3.35	3.40	3.60	3.45	3.30	3.20	3.25	2.90	3.20	3.10	3.20	3.15	3.10	3.30	3.30	3.20	3.20	3.20
7	3.10	3.00	3.20	3.20	3.20	3.10	3.10	3.20	3.50	3.60	3.50	3.20	3.20	3.10	3.15	3.30	3.40	3.20	3.30	3.40	3.40	3.10	3.20	3.35
8	3.00	(3.10)	3.00	3.05	3.00	3.00	3.10	3.30	3.40	3.60	3.50	3.30	3.50	3.20	3.20	3.25	3.40	3.25	3.20	3.50	3.15	3.35	3.25	(3.20)
9	2.70	3.00	3.10	3.20	3.35	3.20	3.20	3.30	3.50	3.55	3.30	3.35	3.20	3.20	3.20	3.10	3.25	3.10	3.20	3.40	3.30	3.20	3.00	2.90
10	3.00	2.80	2.90	3.05	3.00	3.50	A	3.00	3.30	3.35	3.20	3.05	3.20	3.10	3.10	2.80	3.30	3.10	3.30	2.90	3.10	2.70	3.20	3.20
11	2.80	3.10	3.00	3.00	2.80	(3.50)	3.20	3.10	3.60	3.30	3.20	3.20	3.20	3.20	(3.20)	(3.10)	3.20	3.40	3.30	3.30	3.10	2.90	3.10	3.00
12	2.90	3.00	3.10	3.20	3.20	3.00	3.00	3.20	3.50	3.30	3.40	3.40	3.40	3.20	3.20	3.25	3.30	3.50	3.40	3.10	3.30	3.00	3.00	3.20
13	(3.00)	(2.80)	(3.00)	3.10	3.20	3.00	3.40	3.10	3.50	3.35	3.40	3.30	3.20	3.30	3.25	3.05	3.30	3.20	3.30	3.40	3.10	3.30	3.00	2.90
14	3.00	2.80	3.10	3.20	3.00	3.00	3.00	3.20	3.10	3.50	3.30	3.35	3.10	3.30	3.30	3.20	3.20	3.40	3.20	3.35	3.40	3.10	2.80	2.90
15	2.70	3.00	3.10	3.30	3.10	2.90	3.00	3.20	3.50	3.40	3.40	3.30	3.20	3.40	3.40	3.30	3.30	3.40	3.30	3.30	3.10	3.10	3.10	3.00
16	2.90	3.00	3.20	3.15	3.00	3.00	3.10	3.30	3.50	3.40	3.30	3.40	3.40	3.30	2.90	3.30	3.40	3.20	3.30	3.20	3.30	2.90	3.00	3.00
17	2.90	2.90	2.75	3.00	3.10	3.00	3.20	3.10	3.50	3.50	3.30	3.30	3.30	3.10	3.10	3.20	3.20	3.20	3.20	3.30	3.50	3.15	2.80	2.75
18	2.70	2.80	3.20	3.20	3.20	2.80	2.80	3.10	3.50	3.30	3.15	3.25	3.30	3.25	3.25	(3.05)	(3.20)	3.20	3.25	3.10	3.40	3.20	3.00	3.10
19	2.80	3.00	2.90	(3.20)	3.20	(3.35)	2.90	3.20	3.30	(3.30)	3.20	3.25	3.25	3.15	(3.30)	(3.10)	3.20	3.20	3.20	3.25	(3.15)	3.15	(3.40)	(3.00)
20	(3.10)	(3.10)	(3.00)	(3.00)	(3.00)	(3.40)	(3.20)	(3.20)	3.50	(3.15)	3.20	3.40	3.50	3.30	3.20	3.30	3.20	3.40	3.40	3.40	3.30	3.30	3.10	C
21	3.10	3.00	3.10	3.20	3.20	(3.10)	(3.20)	3.30	3.50	(2.95)	3.20	3.40	3.40	3.40	3.10	3.20	3.40	3.40	3.10	3.30	3.00	2.80	2.90	2.90
22	2.70	2.90	3.00	2.90	3.20	3.20	3.00	2.90	3.40	3.40	3.40	3.10	3.30	3.10	3.25	3.20	3.25	3.25	3.35	3.40	3.40	(3.20)	(3.05)	3.00
23	3.00	3.00	3.00	3.00	3.05	3.05	3.35	3.20	3.50	3.50	(3.10)	3.15	3.35	3.30	3.20	(3.30)	(3.25)	(3.20)	(3.20)	3.20	3.20	3.40	3.20	3.00
24	A	2.60	2.70	2.80	3.10	3.30	3.10	3.10	(3.50)	3.40	3.30	3.20	3.20	3.10	3.10	2.90	3.00	3.20	3.25	3.50	(3.00)	2.80	(2.80)	2.90
25	(2.90)	(3.10)	(3.20)	(3.15)	2.95	2.80	3.10	(2.90)	3.55	3.40	3.35	3.20	3.20	3.30	3.20	3.10	3.25	3.15	3.20	3.30	3.20	3.20	3.20	3.00
26	2.80	2.90	3.00	3.10	3.30	3.35	3.30	3.30	3.60	3.60	3.55	3.30	3.40	3.50	3.40	3.40	3.45	3.45	3.30	3.30	3.40	(3.40)	3.10	3.10
27	3.00	2.90	2.85	2.95	3.20	3.45	3.10	3.10	3.60	3.40	3.10	3.00	3.10	3.10	3.05	3.10	(2.90)	3.20	3.20	3.20	3.00	3.00	2.85	(2.60)
28	2.50	2.70	3.00	3.30	3.20	2.75	(2.80)	(3.00)	3.40	3.55	3.35	3.55	3.30	3.20	3.05	3.45	3.40	3.30	3.40	3.25	3.40	3.30	3.10	3.15
29	2.50	2.90	(3.00)	(3.30)	(3.40)	(2.90)	(3.00)	(3.10)	3.60	3.70	3.30	3.30	3.20	3.25	3.30	3.30	3.30	3.35	3.30	3.15	3.30	3.00	3.00	3.00
30	3.00	3.00	3.00	3.30	3.20	3.00	3.10	3.30	3.70	3.25	3.40	3.40	3.25	3.15	3.30	3.30	3.40	3.40	3.20	3.40	3.10	3.25	3.00	3.10
31	3.05	3.10	3.00	3.30	3.10	3.00	3.40	(3.20)	(3.50)	3.50	3.50	3.50	3.30	C	3.20	3.30	3.20	3.30	3.30	3.30	3.00	2.75	2.80	
Median	2.90	3.00	3.00	3.10	3.10	3.10	3.20	3.20	3.50	3.50	3.30	3.30	3.25	3.20	3.20	3.20	3.25	3.25	3.25	3.30	3.30	3.15	3.00	3.00
Count	30	31	31	31	31	31	31	31	30	31	31	31	31	30	31	31	31	31	31	31	31	31	31	30

Sweep 1.0 Mc to 25.0 Mc in 1.5 sec.

Manual ☐ Automatic ☒

TABLE 70
Central Radio Propagation Laboratory, National Bureau of Standards, Washington 25, D. C.

(M3000)FI, _____ (Unit) _____ January, 1956 (Month)

January, 1956
(Month)

(Unit)	(Characteristic)	(Unit)	(Month)
Washington	Washington	Washington	D.C.

Lat 38.7°N Long 77.1°W

IONOSPHERIC DATA

National Bureau of Standards

Scanned by: K.B., L.M., F.M., R.M.
(Institution)

J.P. J.S. J.W. E.W.

Observed at _____																								
Lat <u>38.7°N</u> , Long <u>77.1°W</u>																								
75°W _____ Mean Time _____																								
Calculated by: <u>J.P., J.S., J.W., E.W.</u>																								
Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1									Q	Q	L	L	L	L	L	L ^H	Q							
2									Q	Q	L	L	L	L	L	L	Q							
3									Q	Q	L	L	L	L	A	A	Q							
4									Q	Q	Q ^H	L	L	L	L	L	Q							
5									Q	L	L ^H	L	L	L	L ^H	L	Q							
6									Q	A	L	L	L	L	L	L	L							
7									Q	L	L	L	L	L	L	L	L							
8									Q	L	L	L	L	L	L	L	Q							
9									Q	L	L ^H	L	L	L	L	L	L							
10									Q	Q	L	L	L	L	L	L	L							
11									Q	L	L	L	L	L	L	L	Q							
12									Q	A	A	A	L	A	L	L	Q							
13									Q	L	L	L	L	L	L	L	Q							
14									Q	Q	L	L	L	L ^H	L	L	Q							
15									Q	Q	L	L	L	L	L	L	Q							
16									Q	Q	L	L	L	L	L	L	Q							
17									Q	L	L	L	L	L	L ^H	L	Q							
18									Q	Q	L	L	L	L	L	L	Q							
19									Q	L	L	L	L	L	L	L	Q							
20									Q	L	L	L	L	L	L	L	L							
21									Q	Q	L	L	L	L	L	L	Q							
22									Q	Q	L	L	L	L	L	L	L							
23									Q	Q	L ^H	L	L	L	L	L	Q							
24									Q	Q	L	L	L ^H	L	L	L	Q							
25									Q	Q	L	L	L	L	L	L	Q							
26									Q	Q	L	L	L	L	L	L	L							
27									Q	Q	L	L	L	L	L ^H	L	L							
28									Q	Q	L	L	L	L	L	L	Q							
29									Q	L	L	L	L	L	L	L	Q							
30									Q	Q	Q	L	L	L	L	L	Q							
31									Q	L	L	L	L ^H	C	L	C	L							
Median																								
Count									0	0	0	0	1	0	0	0	0	0						

Sweep 1.0 Mc to 25.0 Mc in 13.5 sec.

Manual ☐ Automatic ☒

TABLE 71

IONOSPHERIC DATA

F Min (Characteristics) Mc (Unit) January 1956
Observed at Washington, D. C.

National Bureau of Standards (Institution)
Scoted by: KB, FM, LM, RM.
Calculated by: JP, JS, JW, EW.

Lot 38.7°N, Long 77.1°W

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5
2	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5
3	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5
4	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5
5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5
6	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5
7	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5
8	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5
9	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5
10	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5
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22	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5
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24	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5
25	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5
26	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5
27	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5
28	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5
29	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5
30	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5
31	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5
Median																								
Count																								

Sweep 1.0 Mc to 25.0 Mc in 13.5 sec.

Manual ☐ Automatic ☒

Note

Beginning with data for January 1956, no values of h'Es, (M1500)F2, or (M1500)E will be reported from the Washington, D. C., ionosphere station.

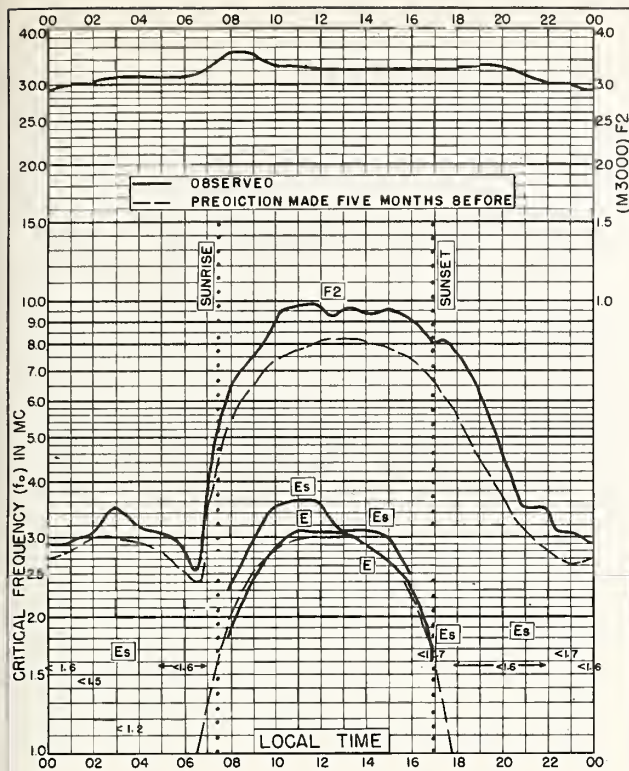


Fig. 1. WASHINGTON, D. C.
38.7°N, 77.1°W
JANUARY 1956

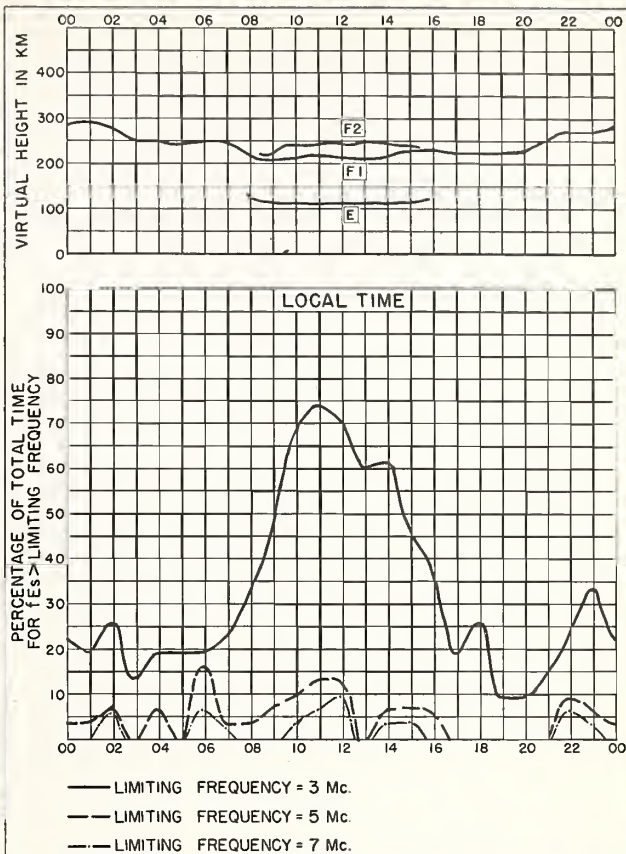


Fig. 2. WASHINGTON, D. C.
JANUARY 1956

NBS 490

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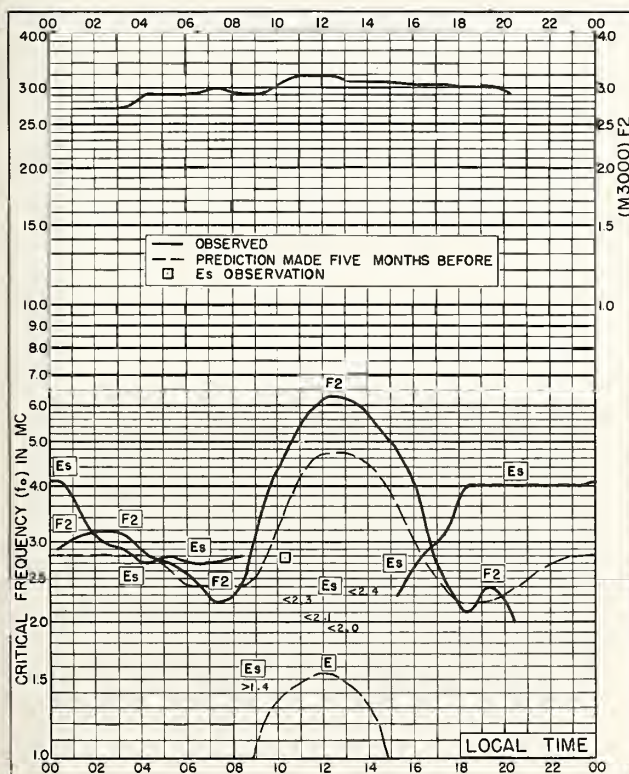


Fig. 3. TROMSØ, NORWAY
69.7°N, 19.0°E
DECEMBER 1955

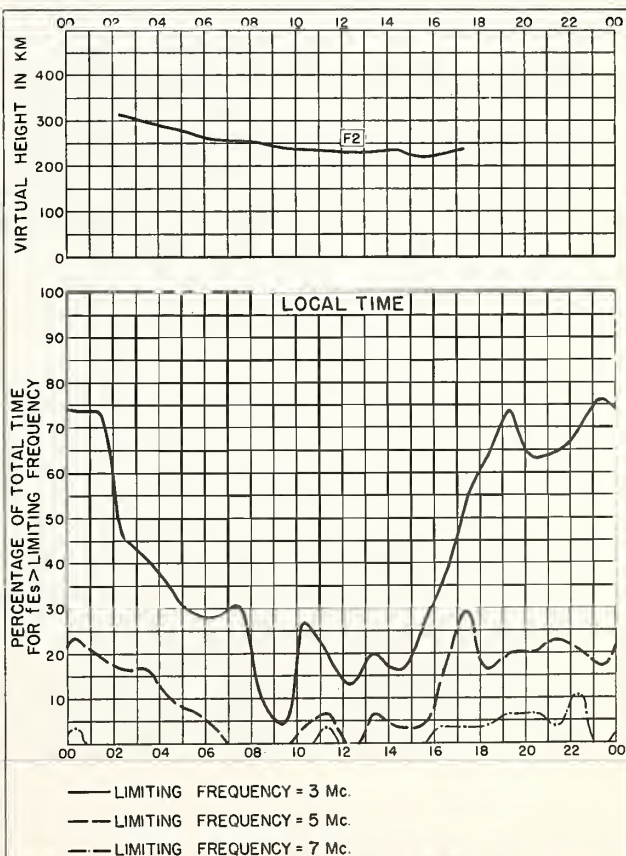


Fig. 4. TROMSØ, NORWAY
DECEMBER 1955

NBS 490

U. S. GOVERNMENT PRINTING OFFICE: 1957

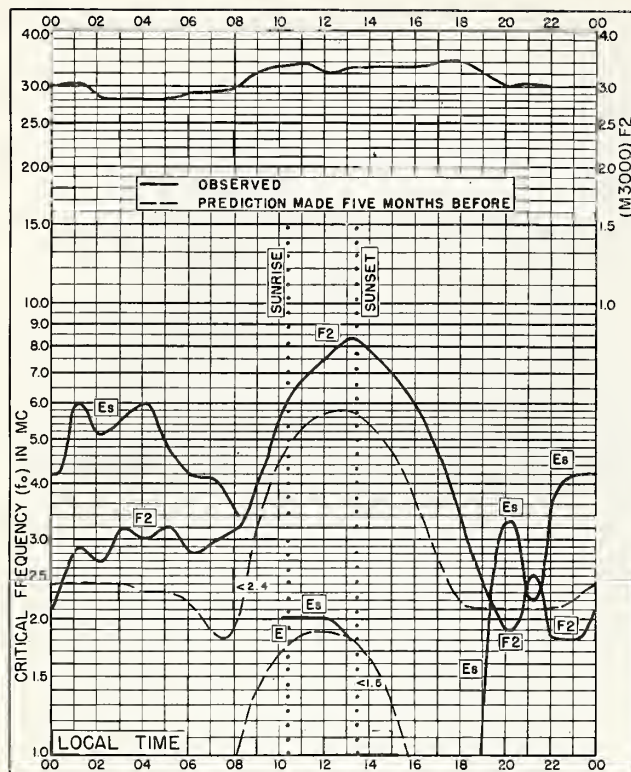


Fig. 5. FAIRBANKS, ALASKA
64.9°N, 147.8°W DECEMBER 1955

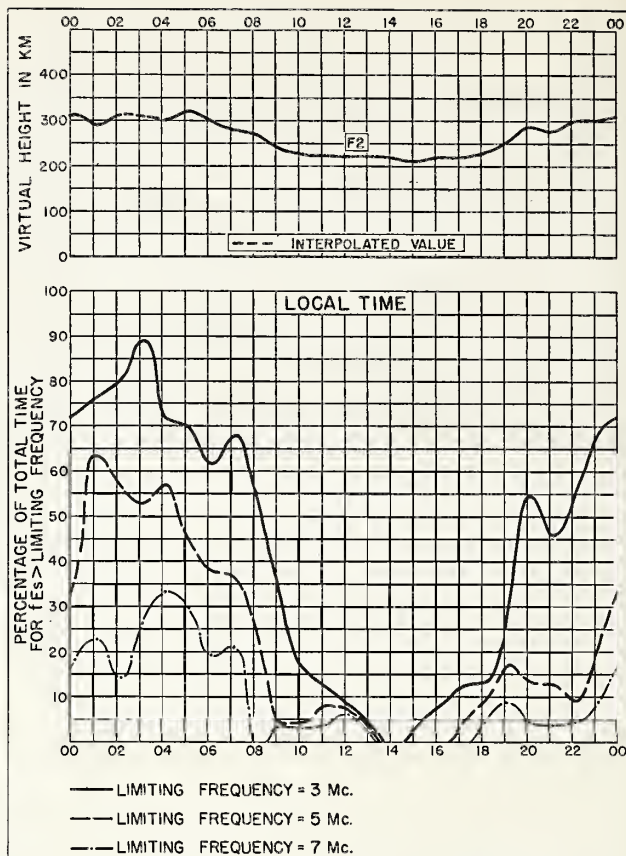


Fig. 6. FAIRBANKS, ALASKA DECEMBER 1955

NBS 490

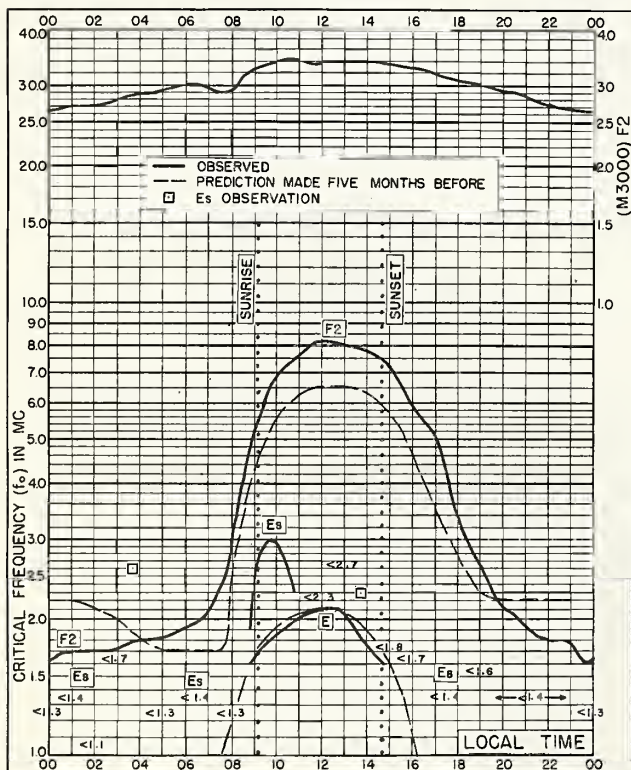


Fig. 7. OSLO, NORWAY
60.0°N, 11.1°E DECEMBER 1955

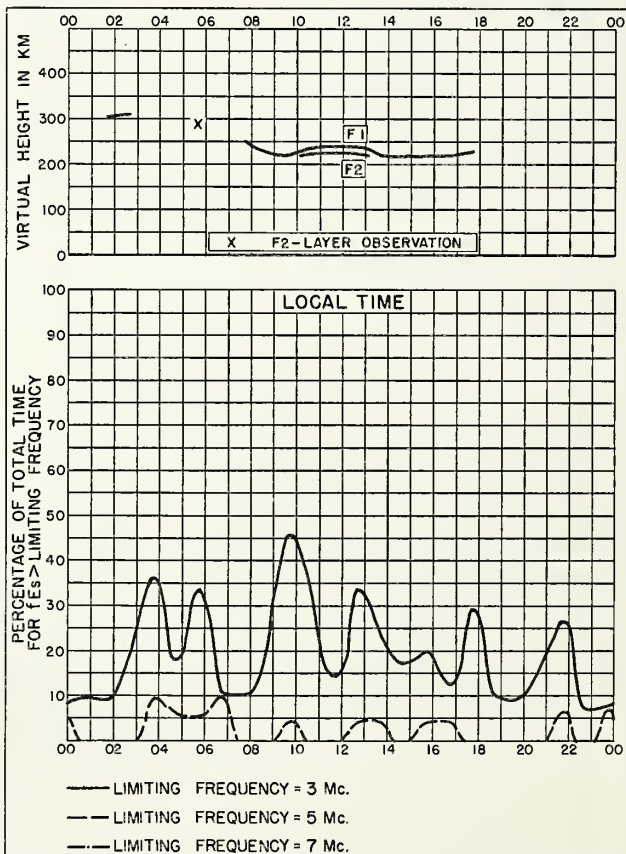


Fig. 8. OSLO, NORWAY DECEMBER 1955

NBS 490

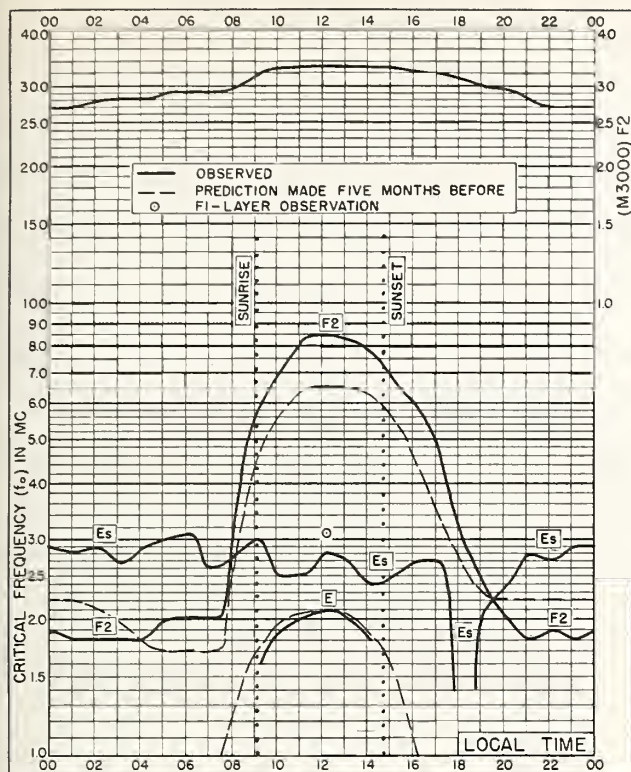


Fig. 9. UPSALA, SWEDEN
59.8°N, 17.6°E

DECEMBER 1955

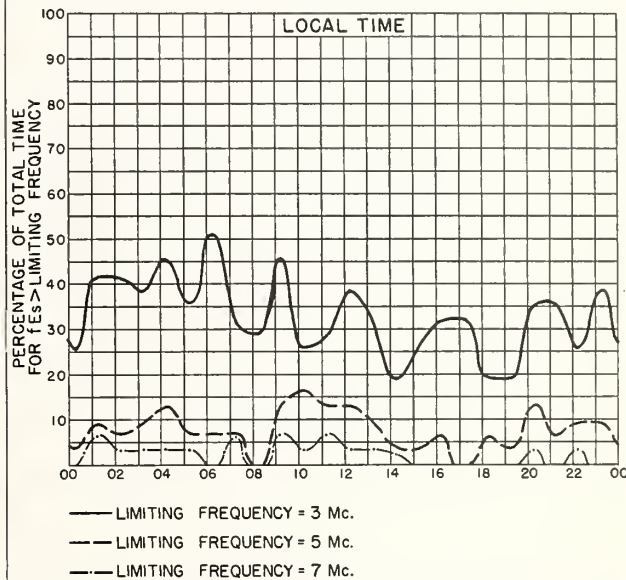
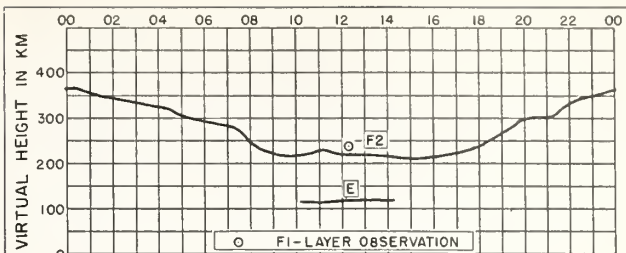


Fig. 10. UPSALA, SWEDEN

DECEMBER 1955

NBS 490

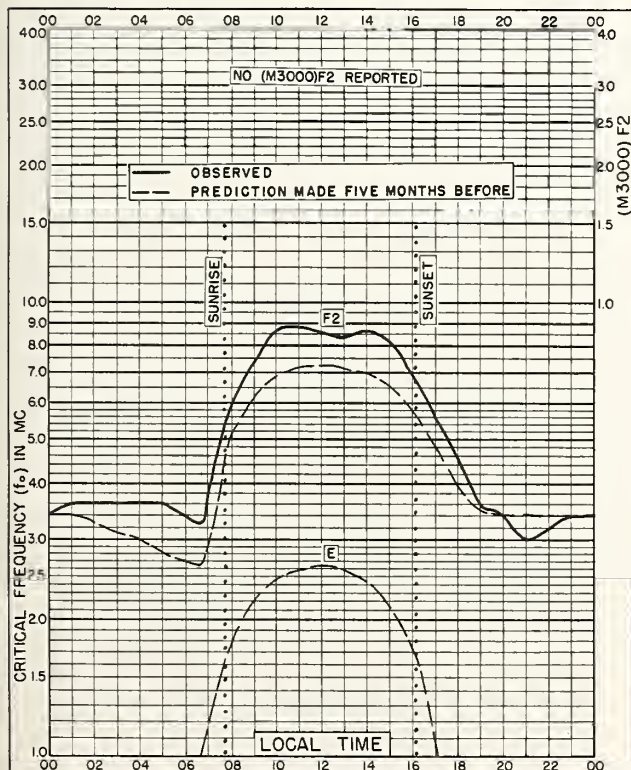


Fig. 11. GRAZ, AUSTRIA
47.1°N, 15.5°E

DECEMBER 1955

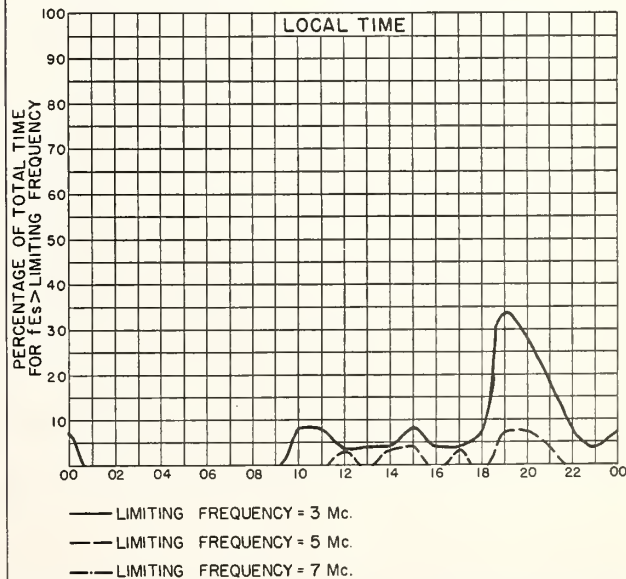
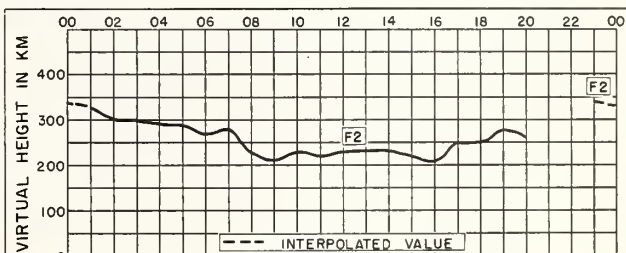


Fig. 12. GRAZ, AUSTRIA

DECEMBER 1955

NBS 490

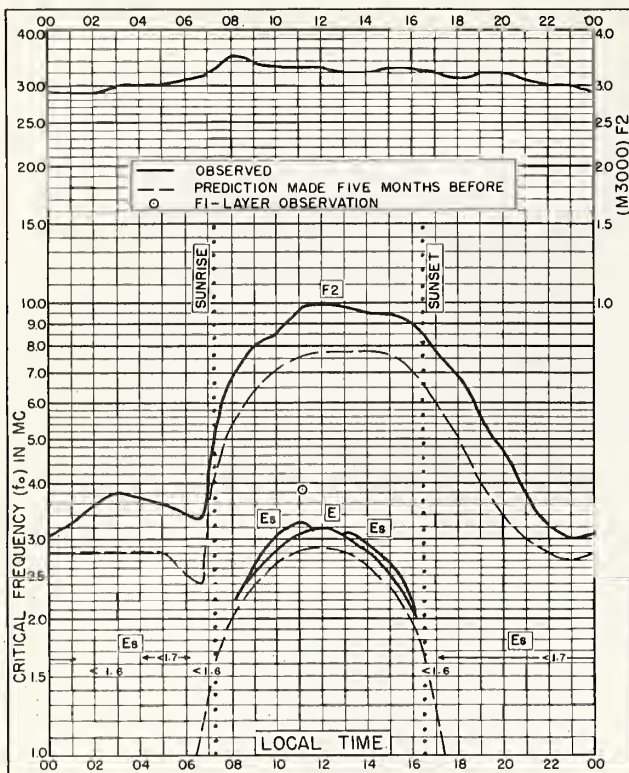


Fig. 13. FT. MONMOUTH, NEW JERSEY
40.3°N, 74.1°W DECEMBER 1955

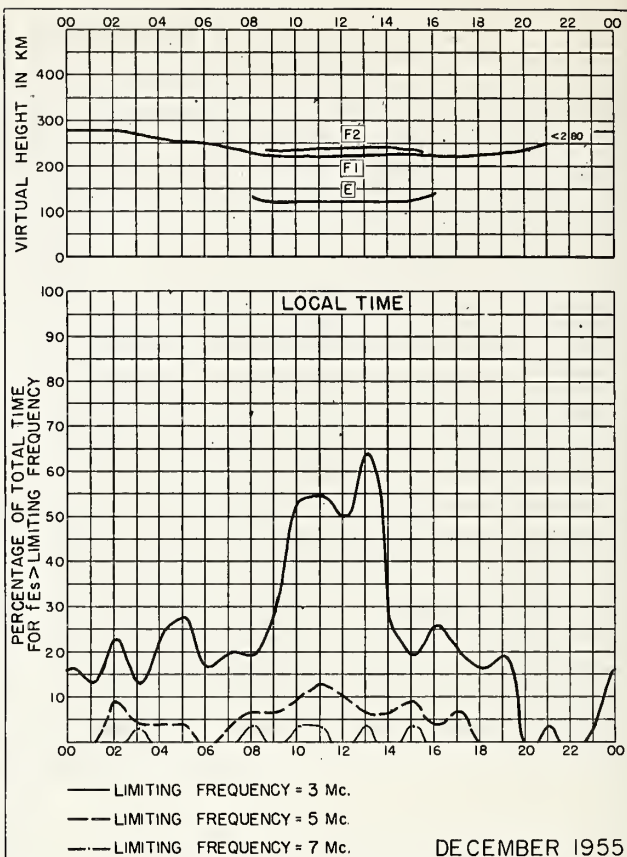


Fig. 14. FT. MONMOUTH, NEW JERSEY

NBS 490

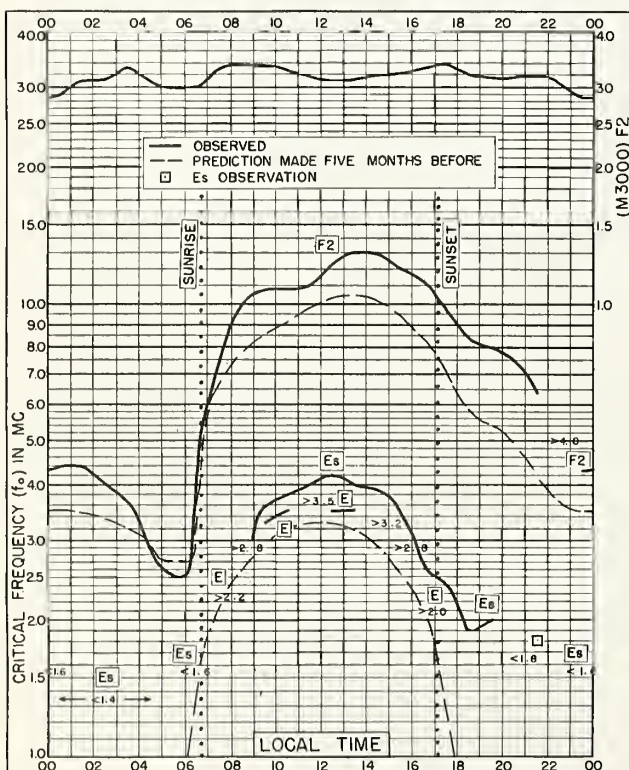


Fig. 15. OKINAWA I.
26.3°N, 127.8°E DECEMBER 1955

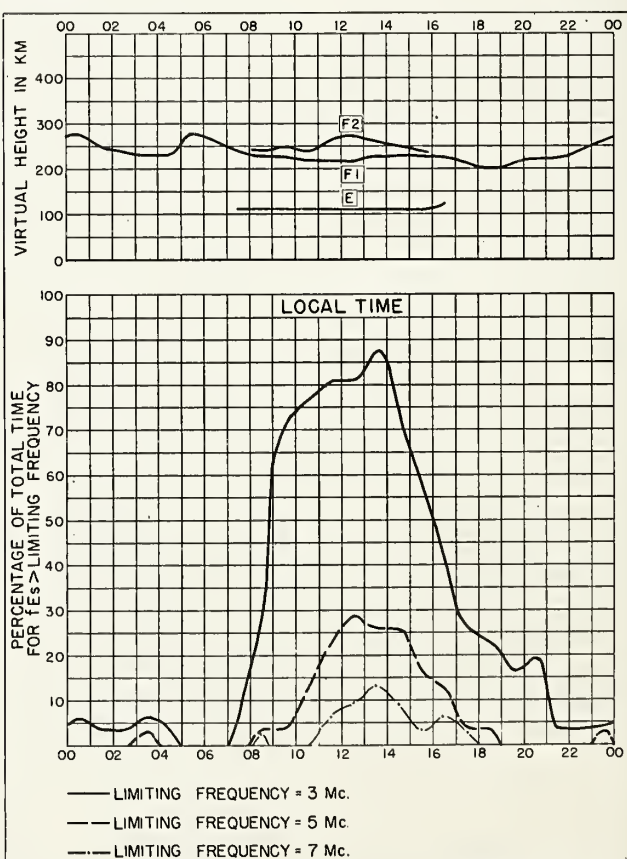


Fig. 16. OKINAWA I. DECEMBER 1955

NBS 490

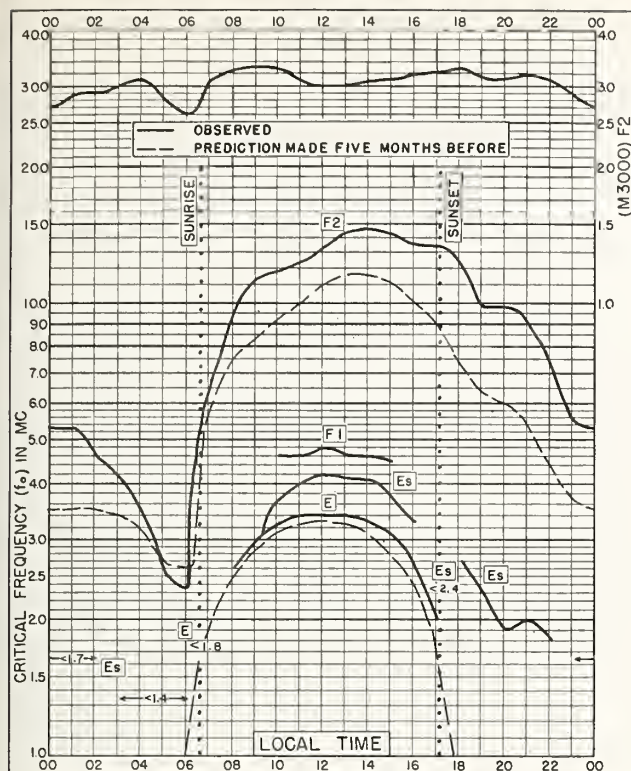


Fig. 17. FORMOSA, CHINA
25.0°N, 121.5°E DECEMBER 1955

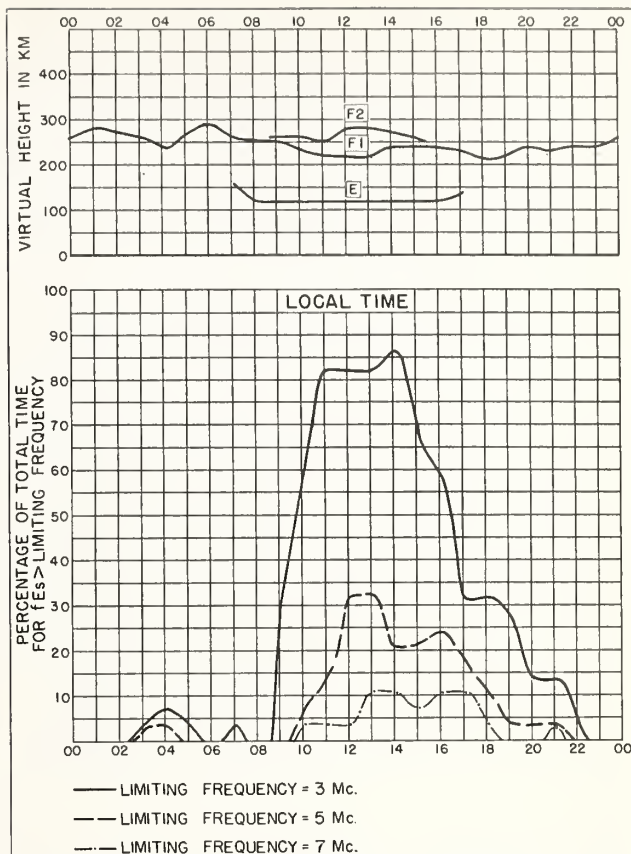


Fig. 18. FORMOSA, CHINA DECEMBER 1955

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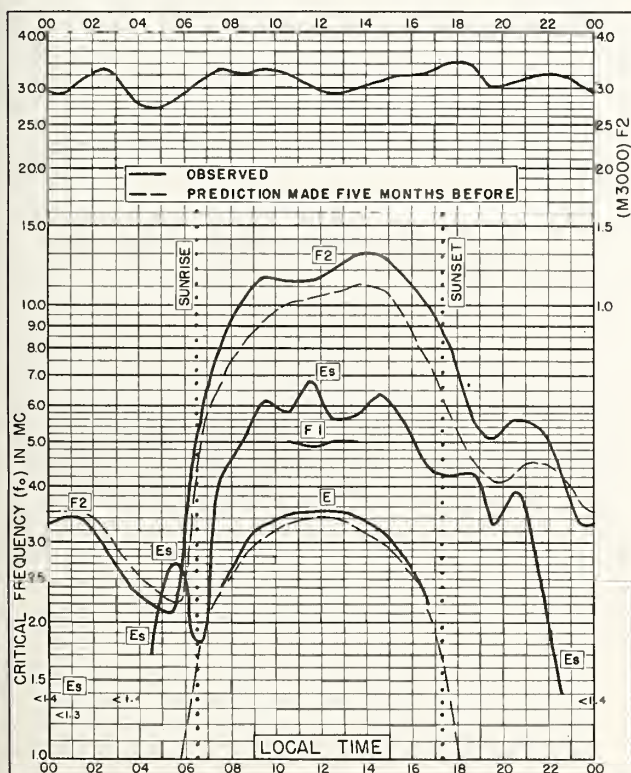


Fig. 19. MAUI, HAWAII
20.8°N, 156.5°W DECEMBER 1955

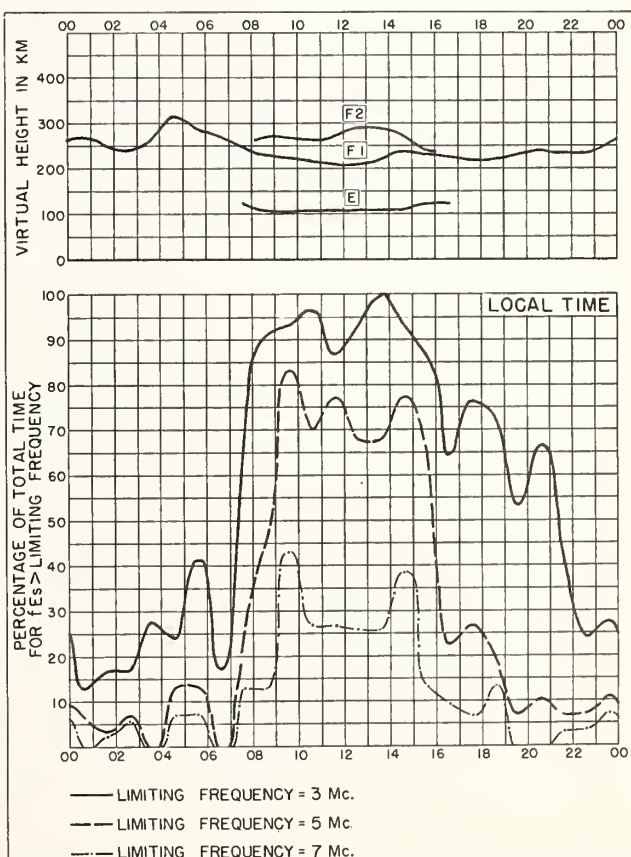


Fig. 20. MAUI, HAWAII DECEMBER 1955

NBS 490

U. S. GOVERNMENT PRINTING OFFICE 15-5877

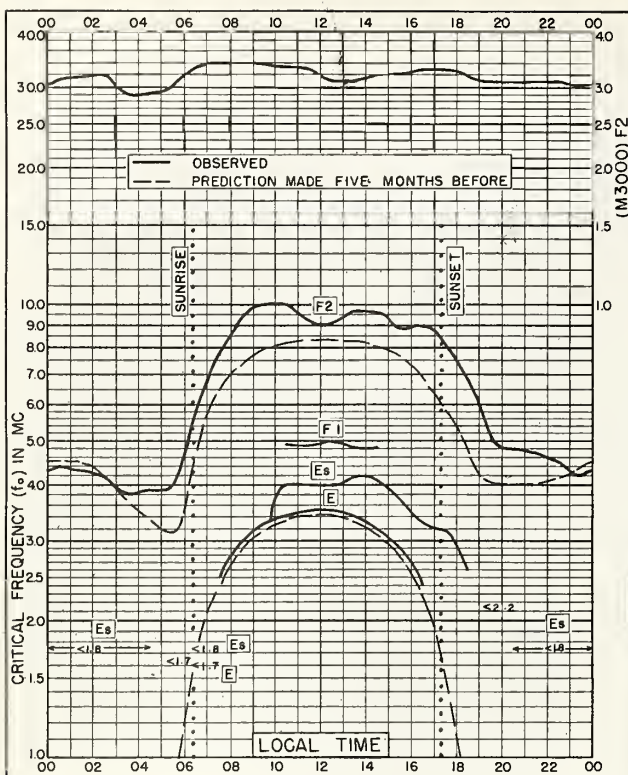


Fig. 21. PUERTO RICO, W.I.
18.5°N, 67.2°W DECEMBER 1955

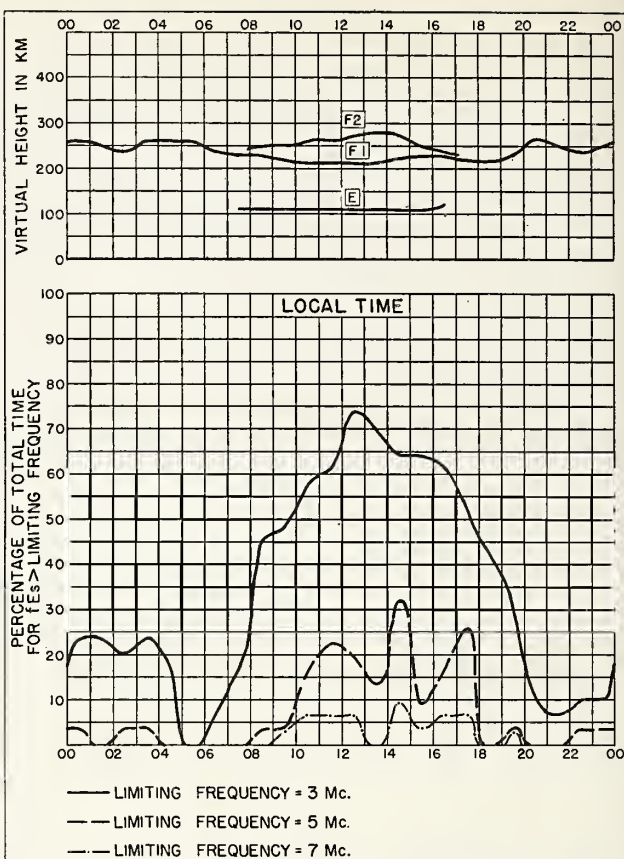


Fig. 22. PUERTO RICO, W.I. DECEMBER 1955

NBS 490

U.S. GOVERNMENT PRINTING OFFICE: 1957

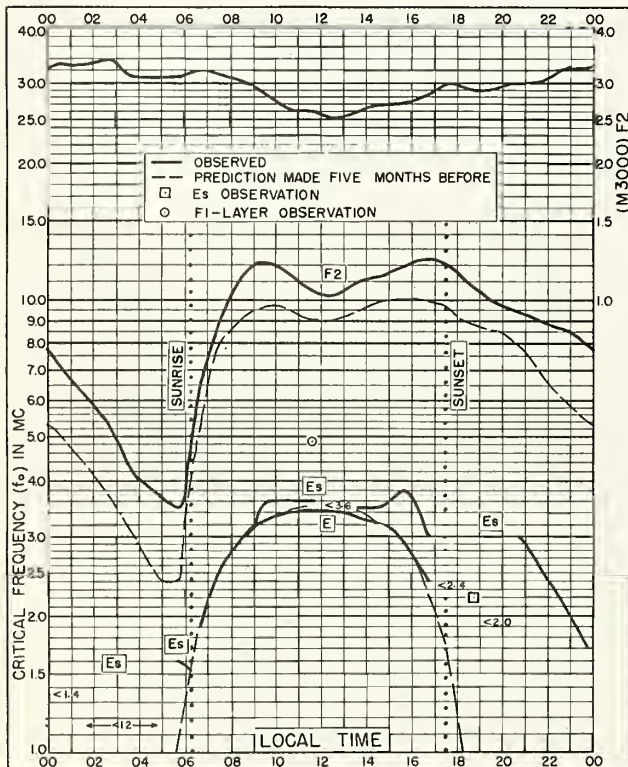


Fig. 23. GUAM I.
13.6°N, 144.9°E DECEMBER 1955

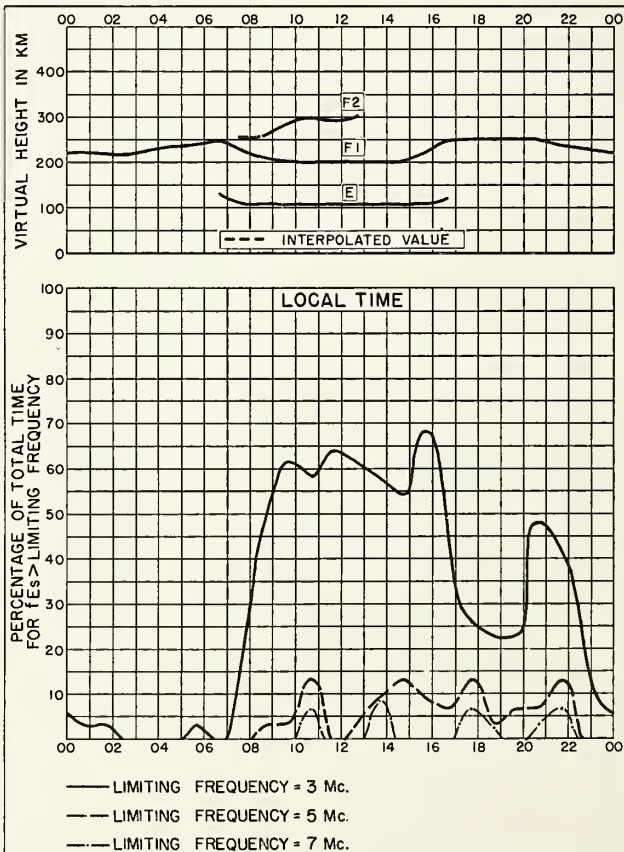


Fig. 24. GUAM I. DECEMBER 1955

NBS 490

U.S. GOVERNMENT PRINTING OFFICE: 1957

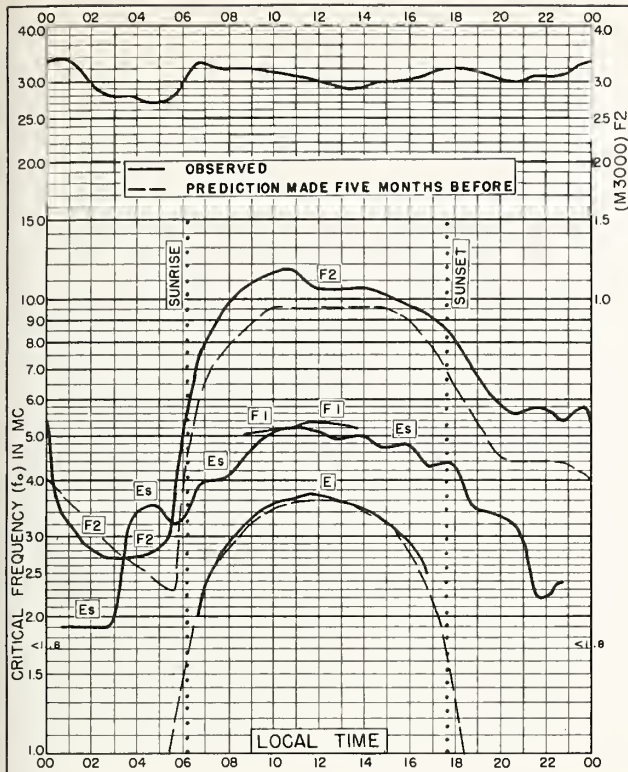


Fig. 25. PANAMA CANAL ZONE
9.4°N, 79.9°W DECEMBER 1955

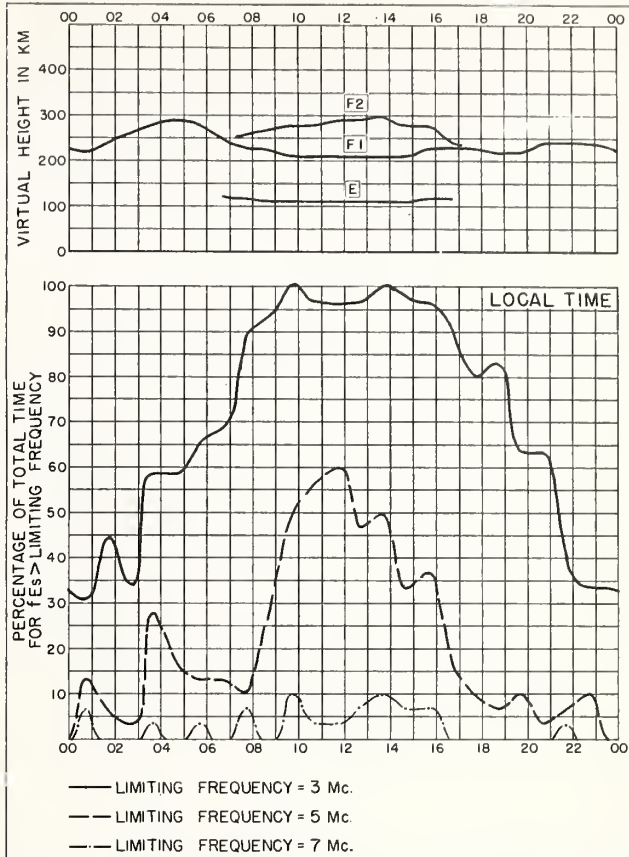


Fig. 26. PANAMA CANAL ZONE DECEMBER 1955

NBS 490

U. S. GOVERNMENT PRINTING OFFICE 11-21877

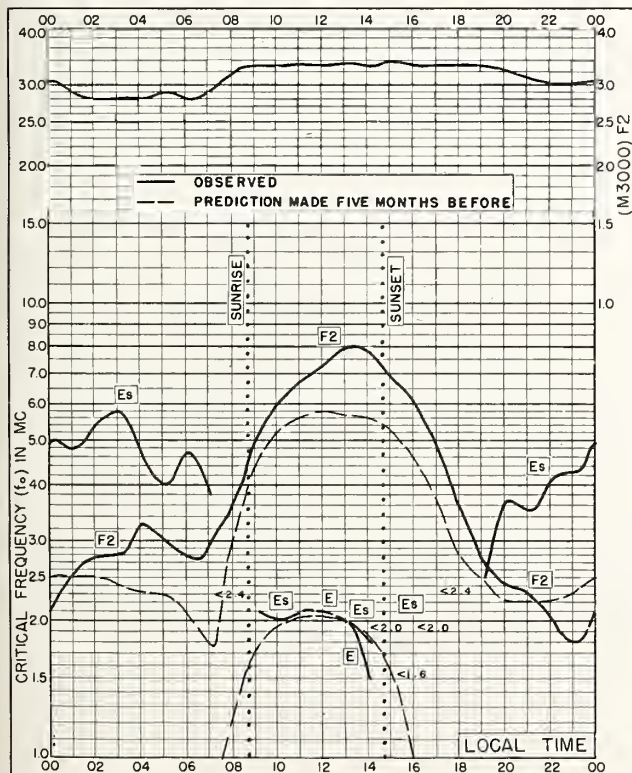


Fig. 27. FAIRBANKS, ALASKA
64.9°N, 147.8°W NOVEMBER 1955

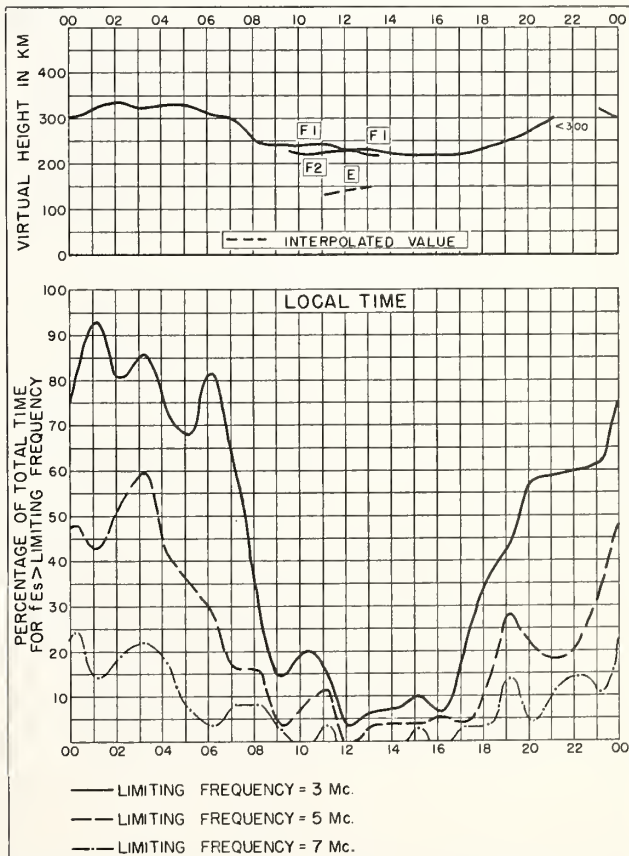


Fig. 28. FAIRBANKS, ALASKA NOVEMBER 1955

NBS 490

U. S. GOVERNMENT PRINTING OFFICE 11-21877

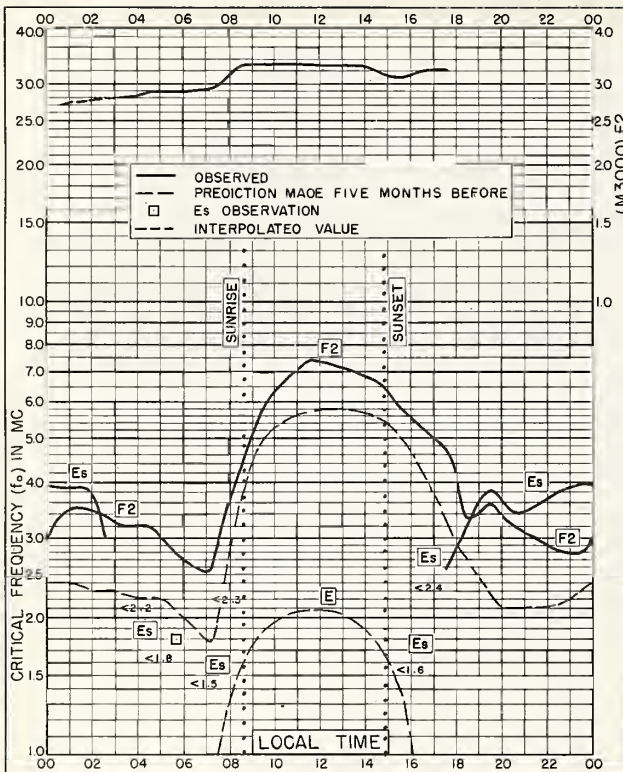


Fig. 29. REYKJAVIK, ICELAND
64.1°N, 21.8°W

NOVEMBER 1955

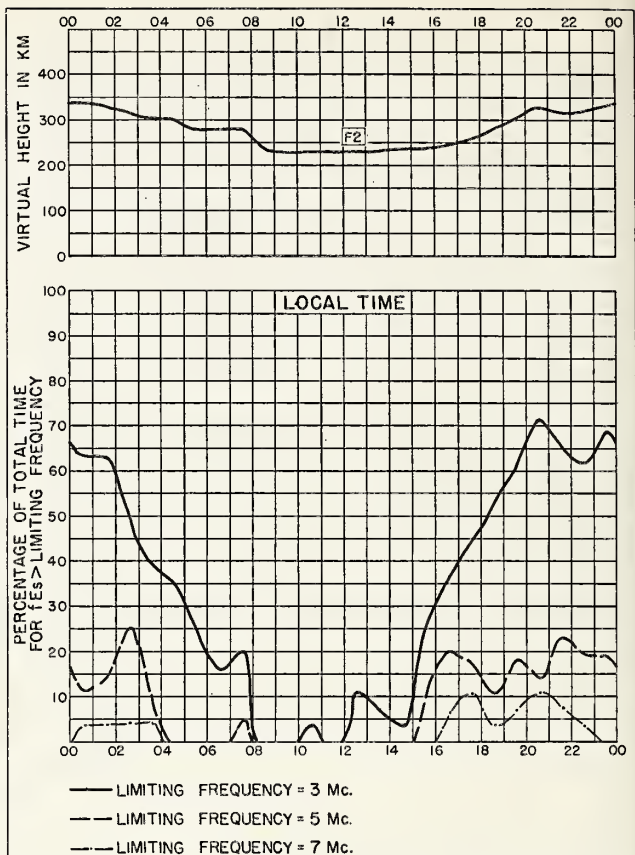


Fig. 30. REYKJAVIK, ICELAND NOVEMBER 1955

NBS 490

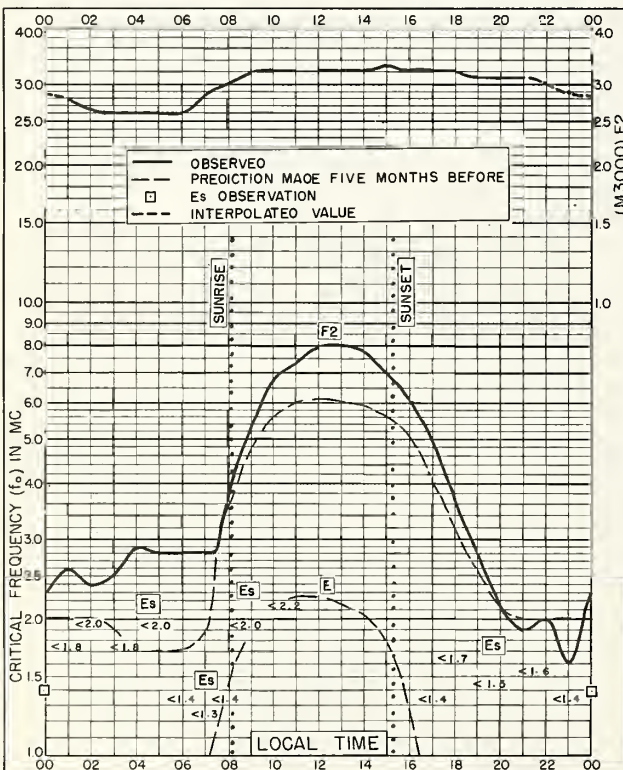


Fig. 31. ANCHORAGE, ALASKA
61.2°N, 149.9°W

NOVEMBER 1955

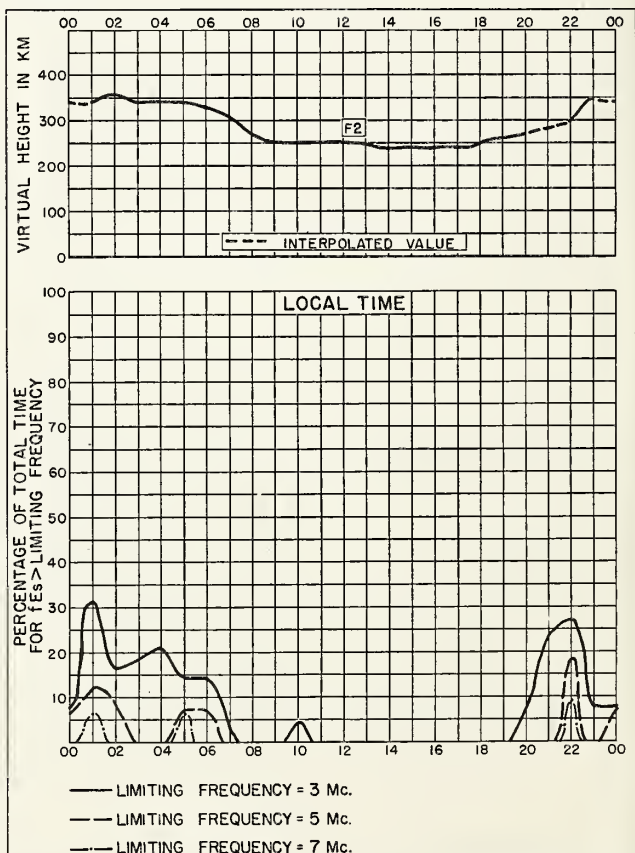


Fig. 32. ANCHORAGE, ALASKA NOVEMBER 1955

NBS 490

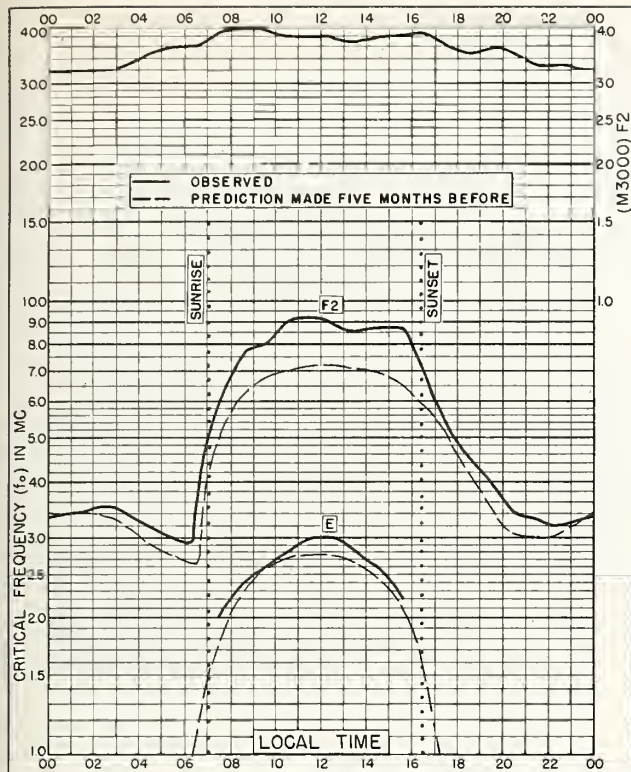


Fig. 33. SCHWARZENBURG, SWITZERLAND
46.8°N, 7.3°E NOVEMBER 1955

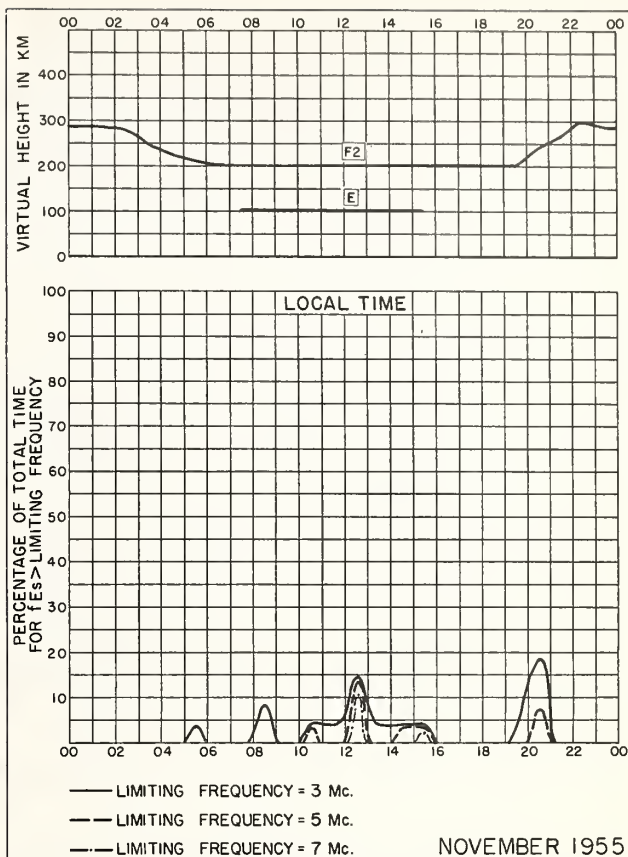


Fig. 34. SCHWARZENBURG, SWITZERLAND
NOVEMBER 1955

NBS 490

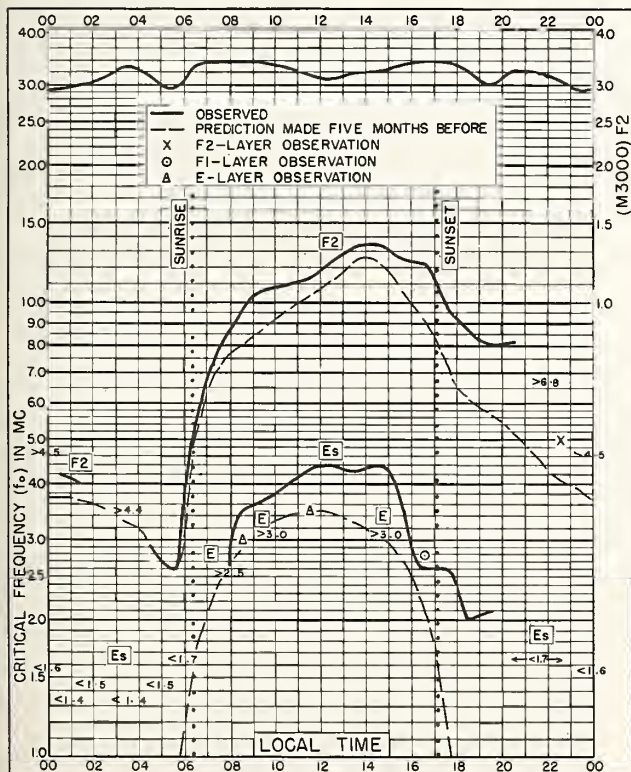


Fig. 35. OKINAWA I.
26.3°N, 127.8°E NOVEMBER 1955

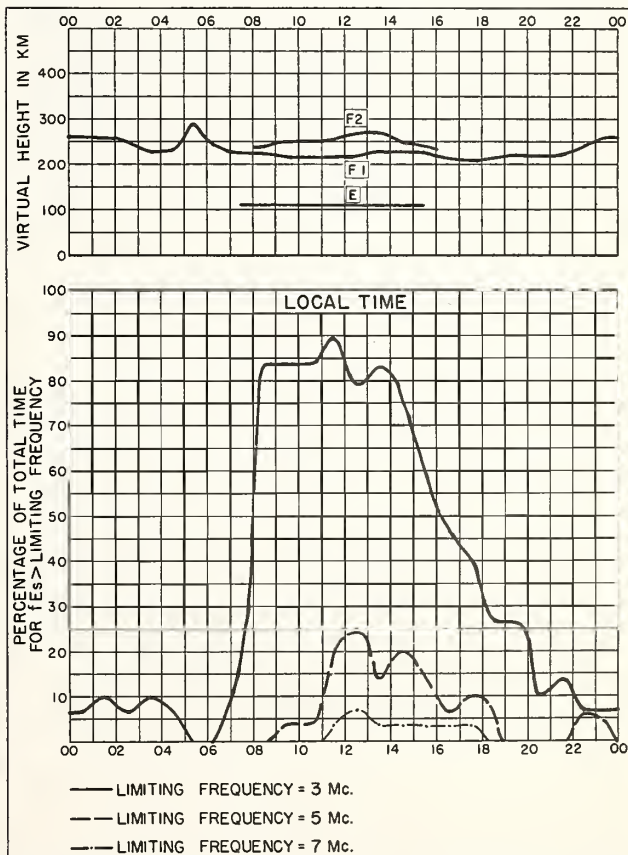


Fig. 36. OKINAWA I.
NOVEMBER 1955

NBS 490

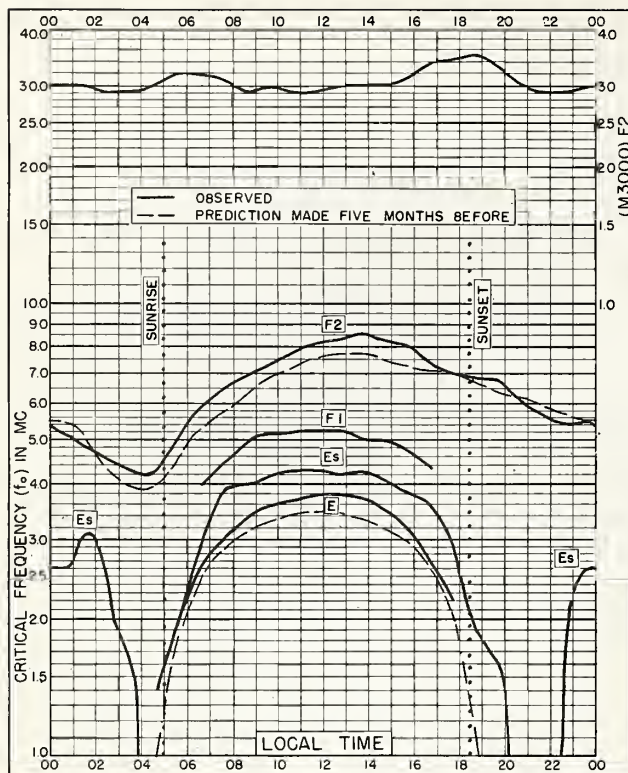


Fig. 37. WATHEROO, W. AUSTRALIA
30.3°S, 115.9°E NOVEMBER 1955

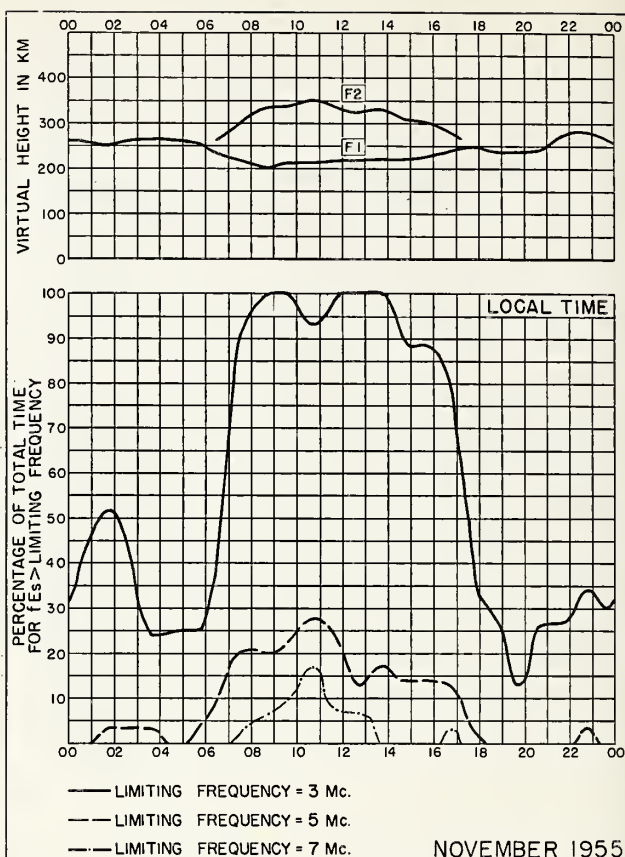


Fig. 38. WATHEROO, W. AUSTRALIA

NBS 490

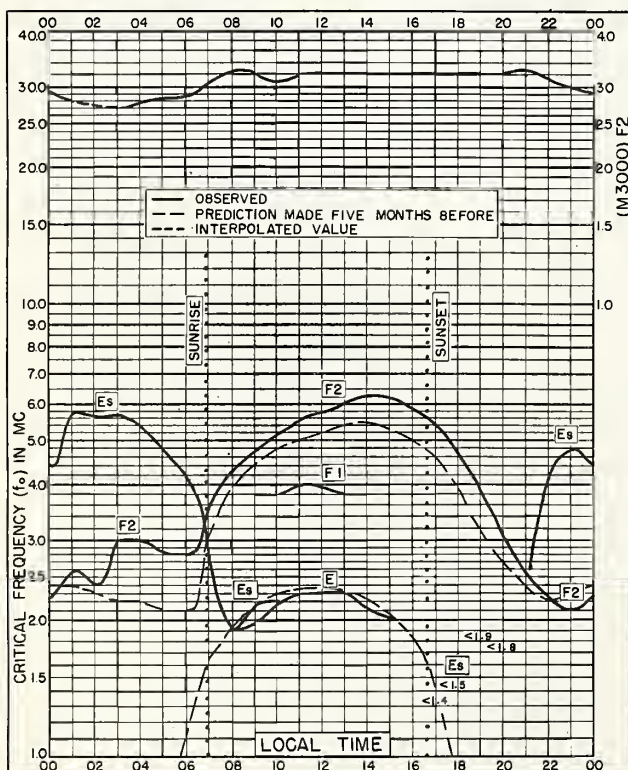


Fig. 39. FAIRBANKS, ALASKA
64.9°N, 147.8°W OCTOBER 1955

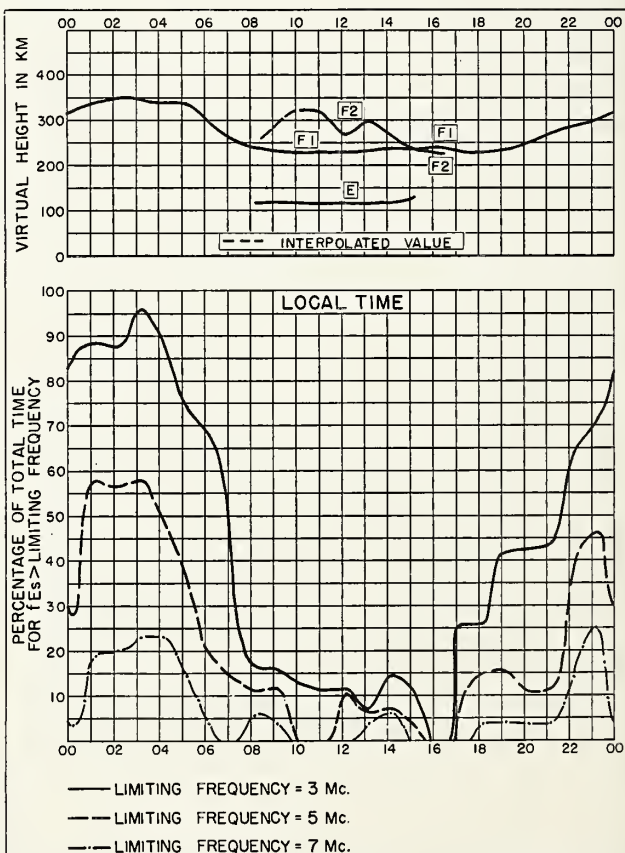


Fig. 40. FAIRBANKS, ALASKA OCTOBER 1955

NBS 490

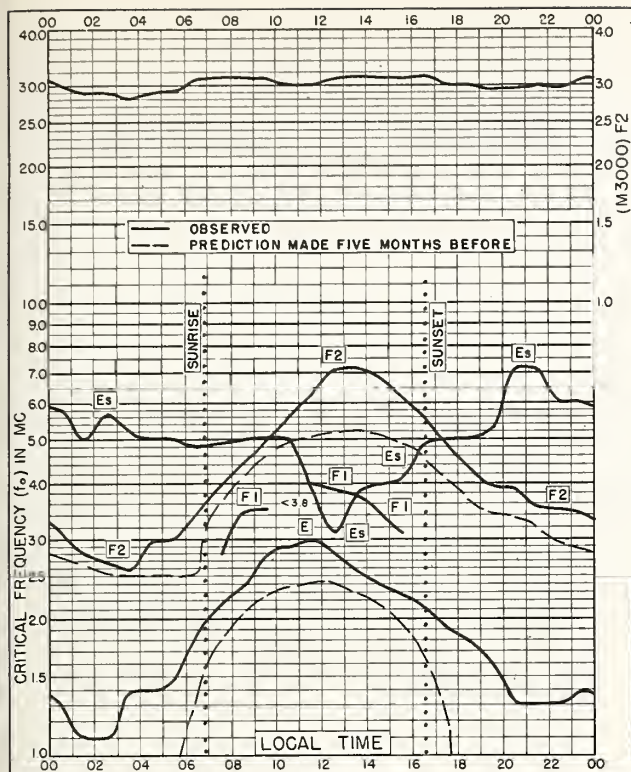


Fig. 41. BAKER LAKE, CANADA
64.3°N, 96.0°W OCTOBER 1955

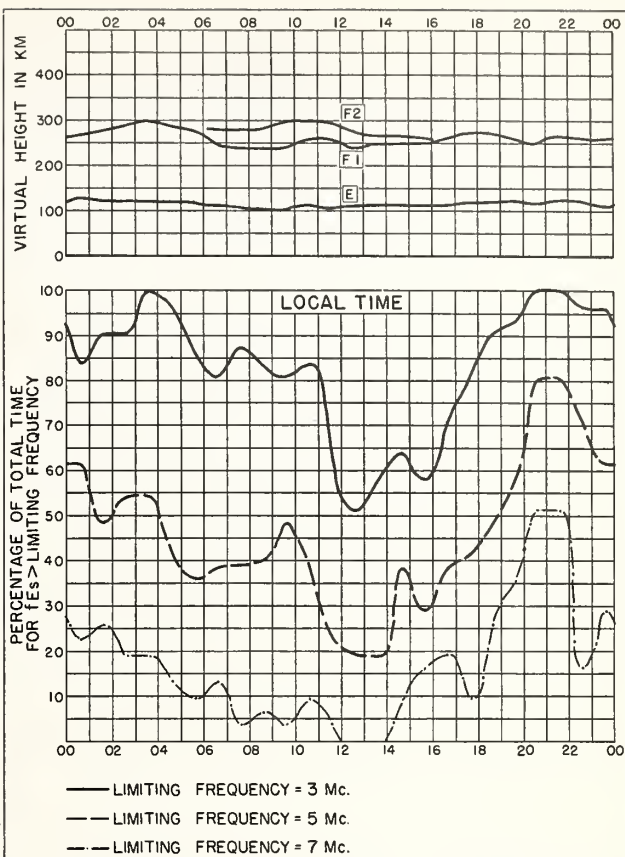


Fig. 42. BAKER LAKE, CANADA OCTOBER 1955

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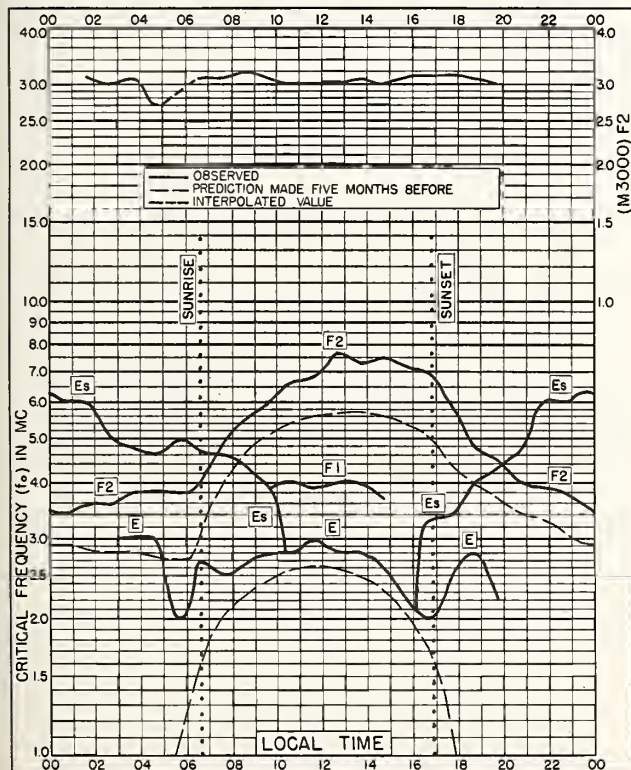


Fig. 43. CHURCHILL, CANADA
58.8°N, 94.2°W OCTOBER 1955

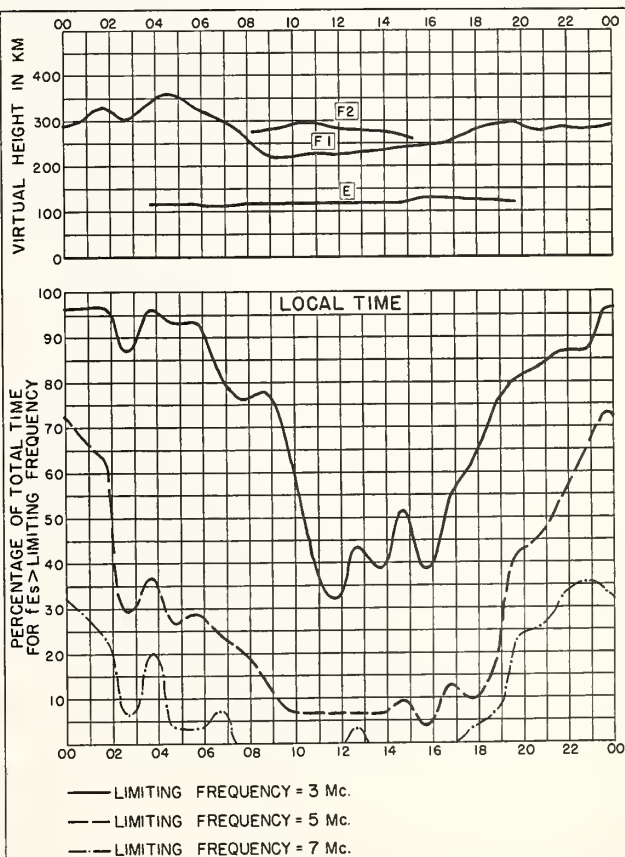


Fig. 44. CHURCHILL, CANADA OCTOBER 1955

NBS 490

U.S. GOVERNMENT PRINTING OFFICE: 1957

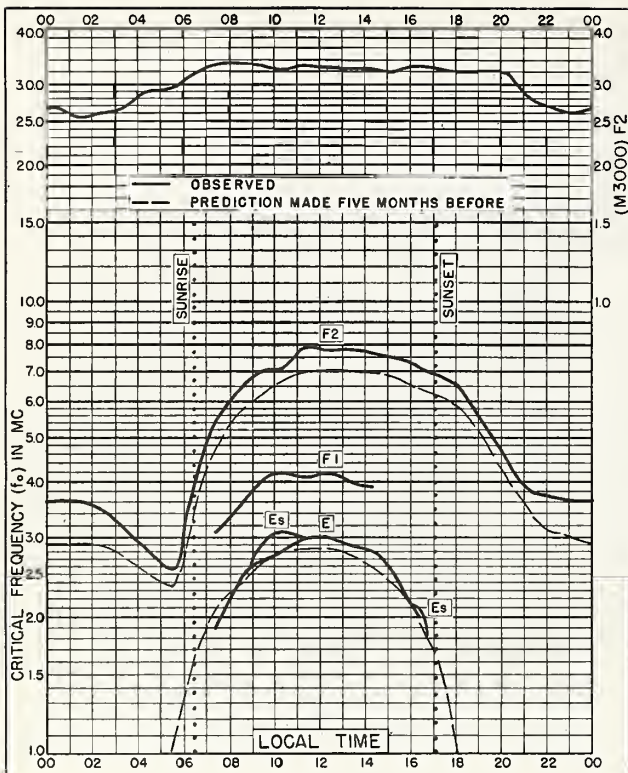


Fig. 45. De BILT, HOLLAND
52.1°N, 5.2°E

OCTOBER 1955

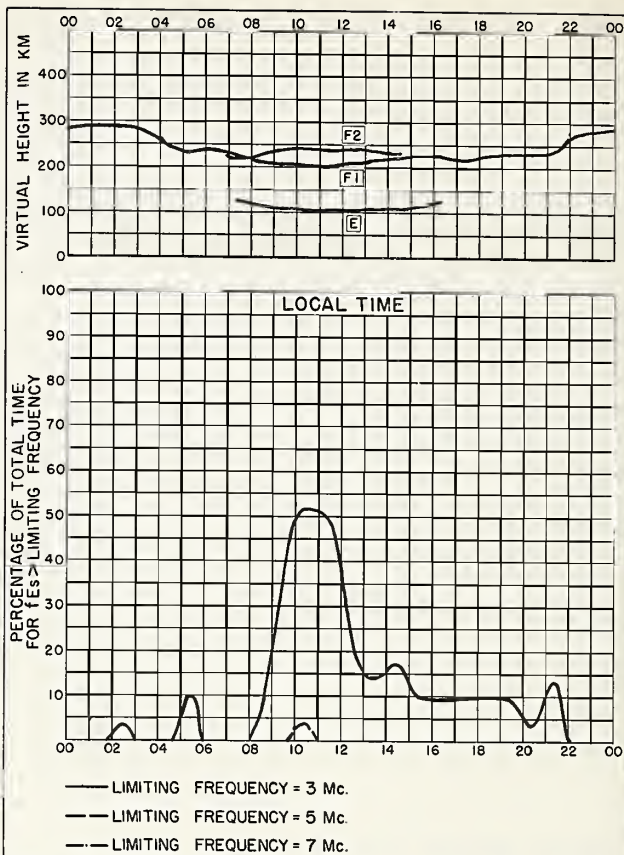


Fig. 46. De BILT, HOLLAND

OCTOBER 1955

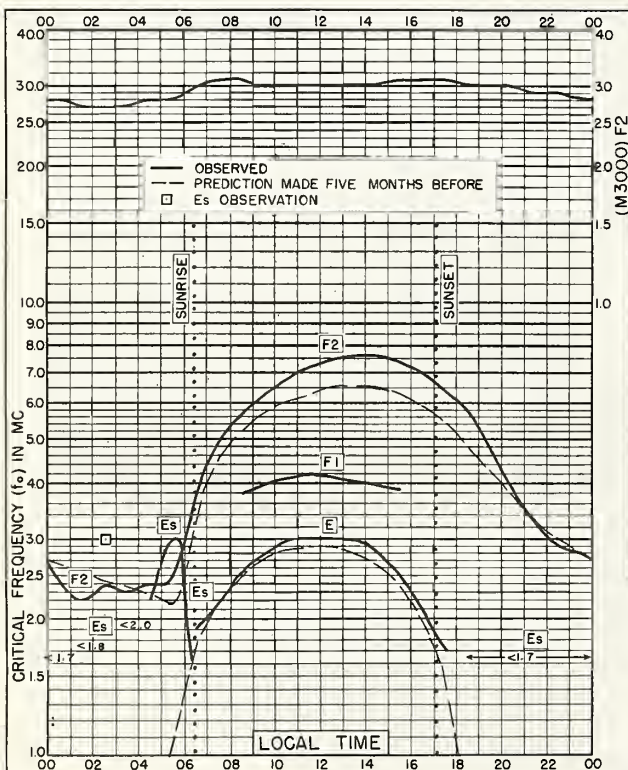


Fig. 47. WINNIPEG, CANADA
49.9°N, 97.4°W

OCTOBER 1955

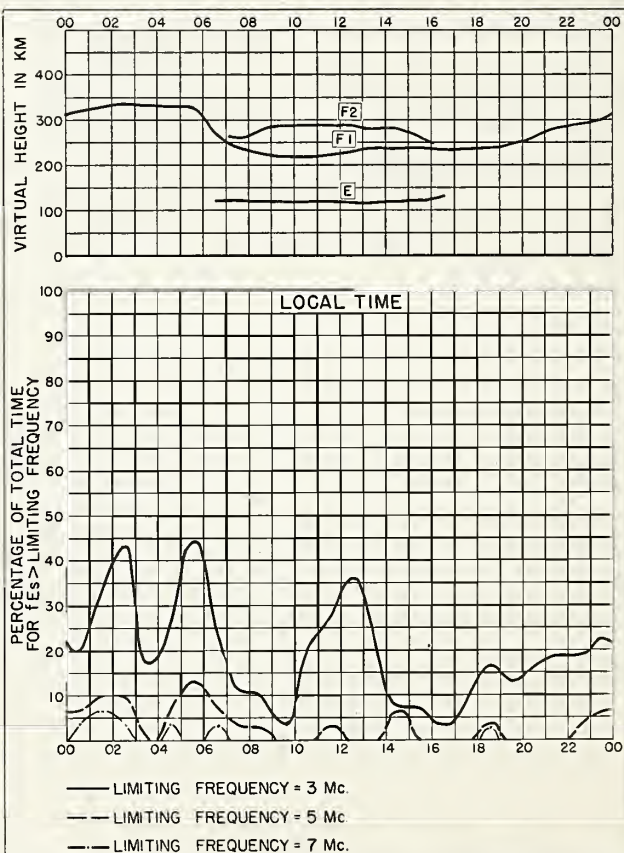


Fig. 48. WINNIPEG, CANADA

OCTOBER 1955

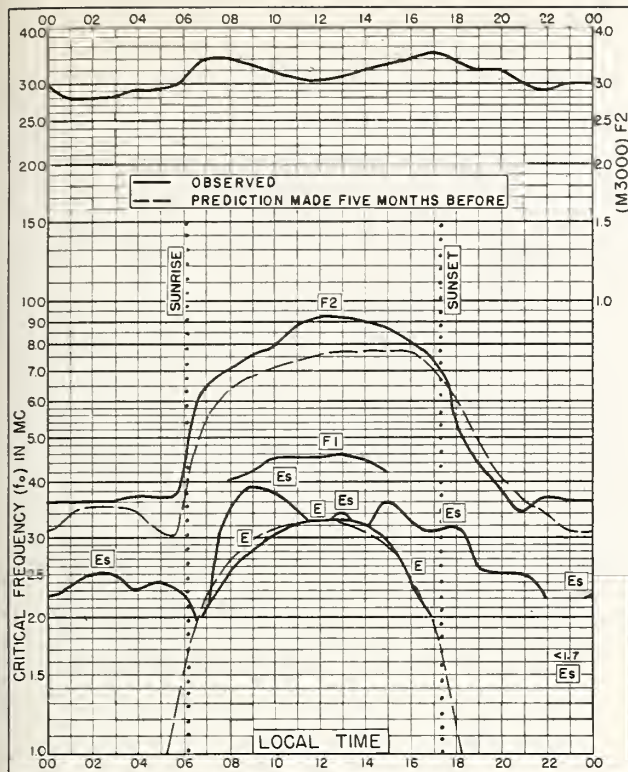


Fig. 49. SAN FRANCISCO, CALIFORNIA
37.4°N, 122.2°W
OCTOBER 1955

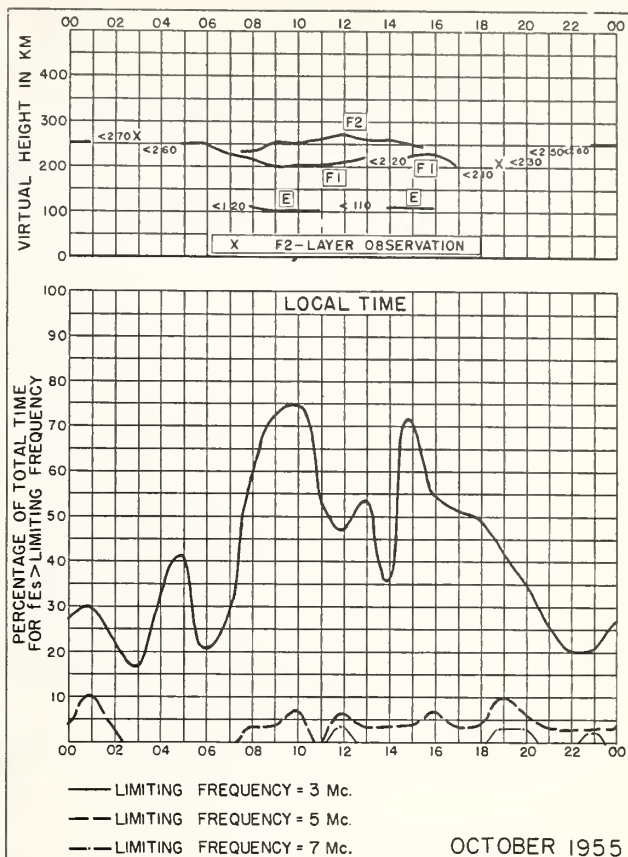


Fig. 50. SAN FRANCISCO, CALIFORNIA

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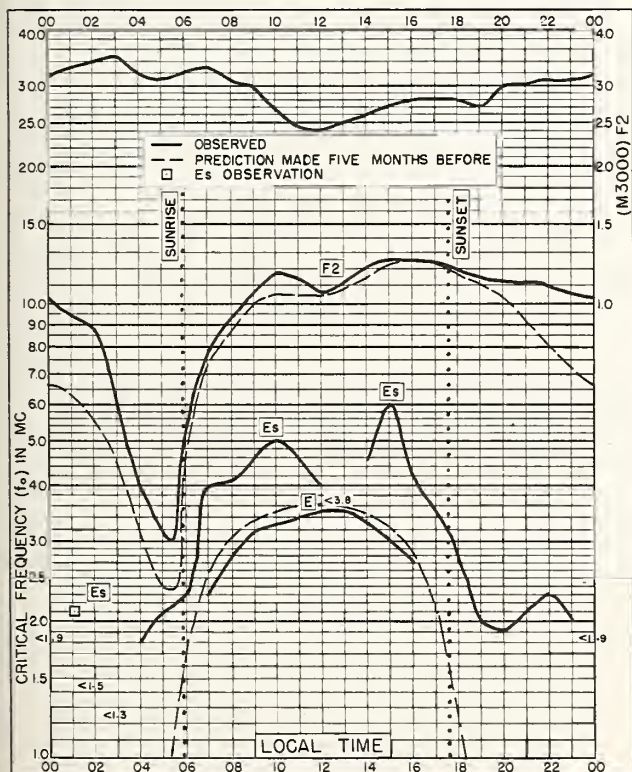


Fig. 51. BAGUIO, P. I.
16.4°N, 120.6°E
OCTOBER 1955

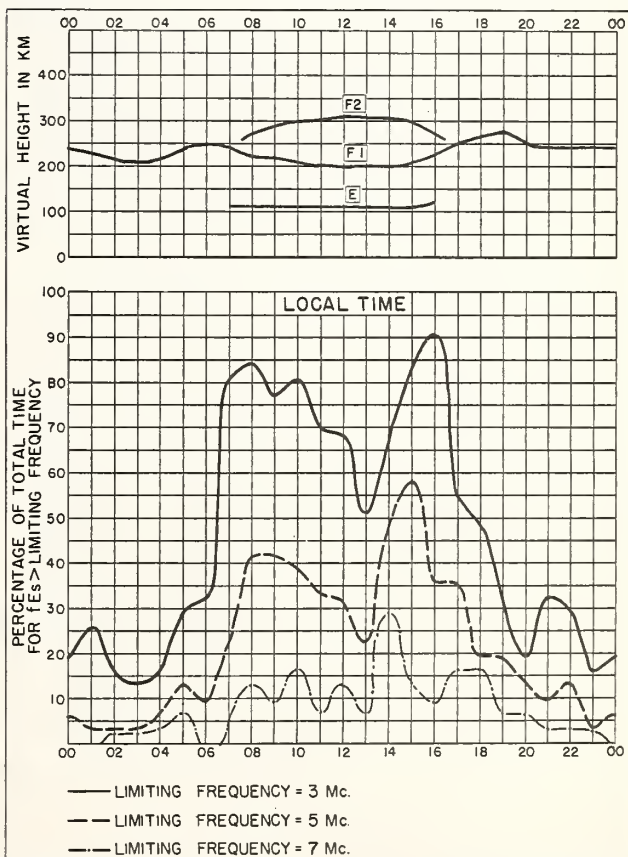


Fig. 52. BAGUIO, P. I.
OCTOBER 1955

NBS 490

U. S. GOVERNMENT PRINTING OFFICE: 1957

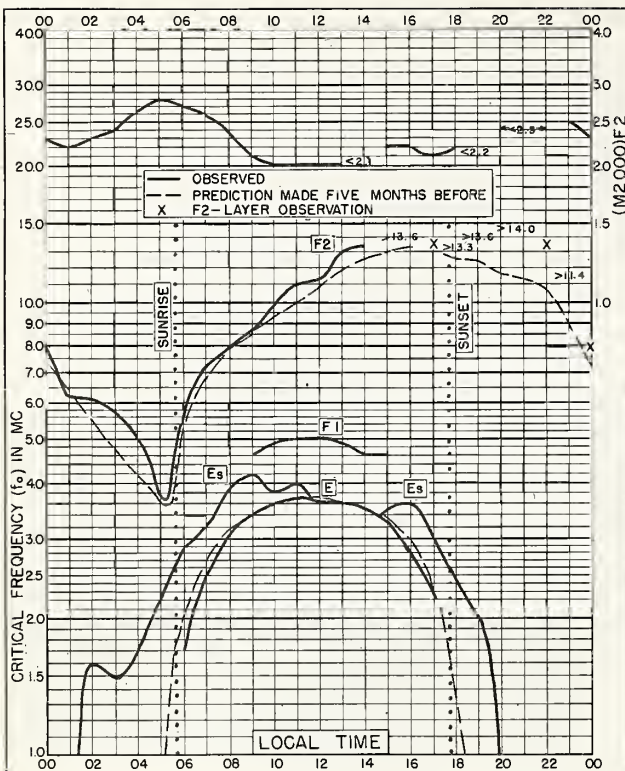


Fig. 53. LEOPOLDVILLE, BELGIAN CONGO
4.4°S, 15.2°E
OCTOBER 1955

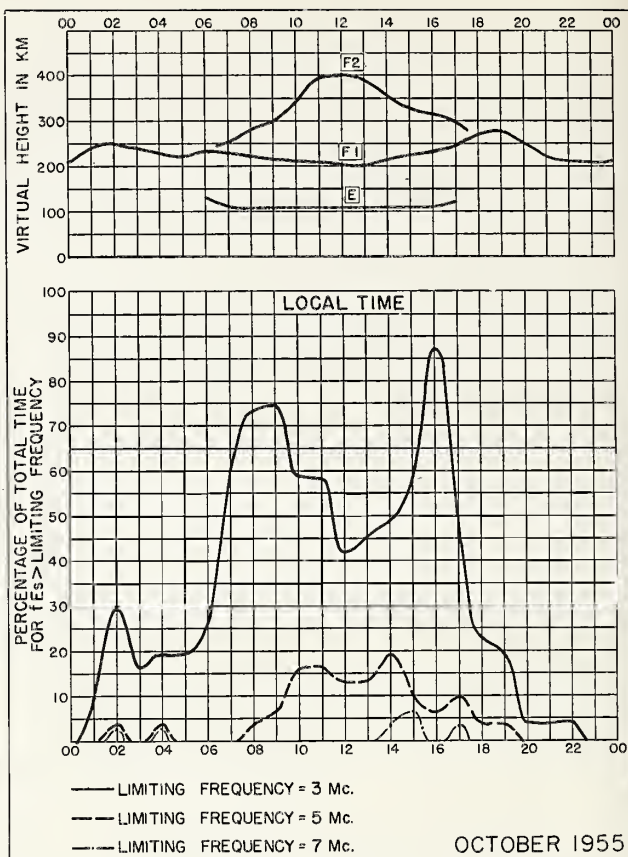


Fig. 54. LEOPOLDVILLE, BELGIAN CONGO
OCTOBER 1955

NBS 490

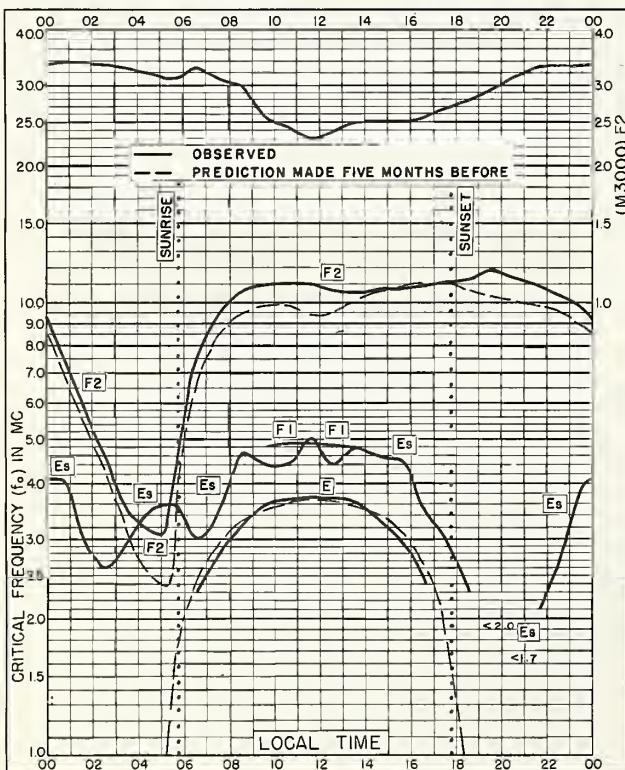


Fig. 55. TALARA, PERU
4.6°S, 81.3°W
OCTOBER 1955

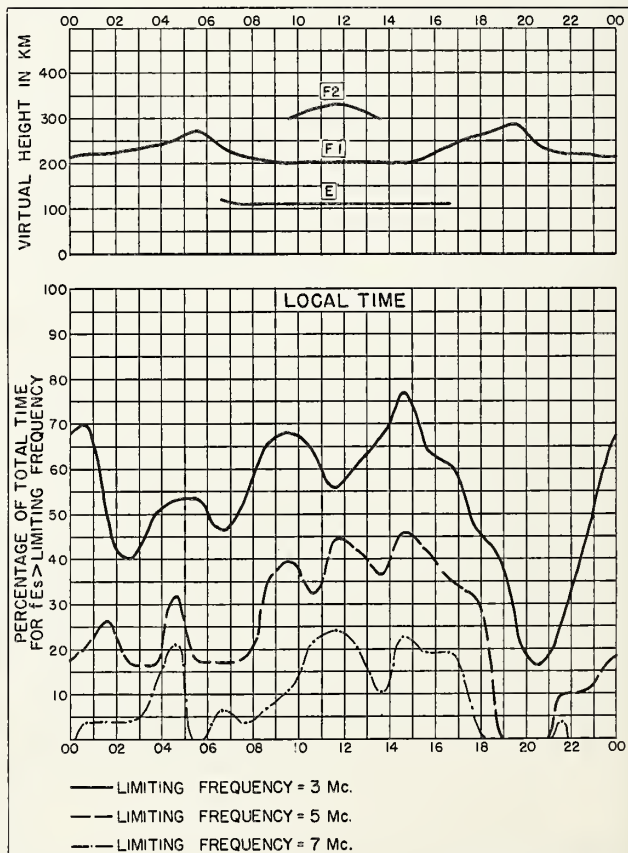


Fig. 56. TALARA, PERU
OCTOBER 1955

NBS 490

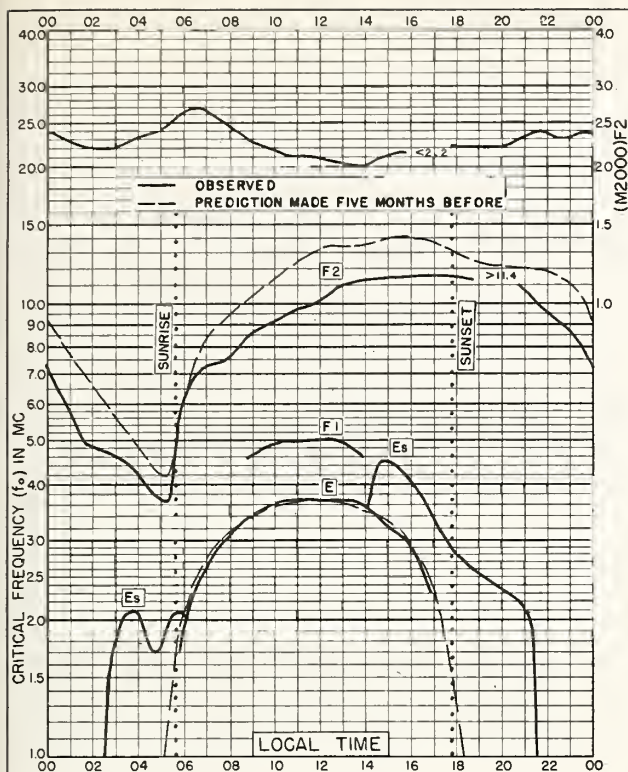


Fig. 57. ELISABETHVILLE, BELGIAN CONGO
11.6°S, 27.5°E
OCTOBER 1955

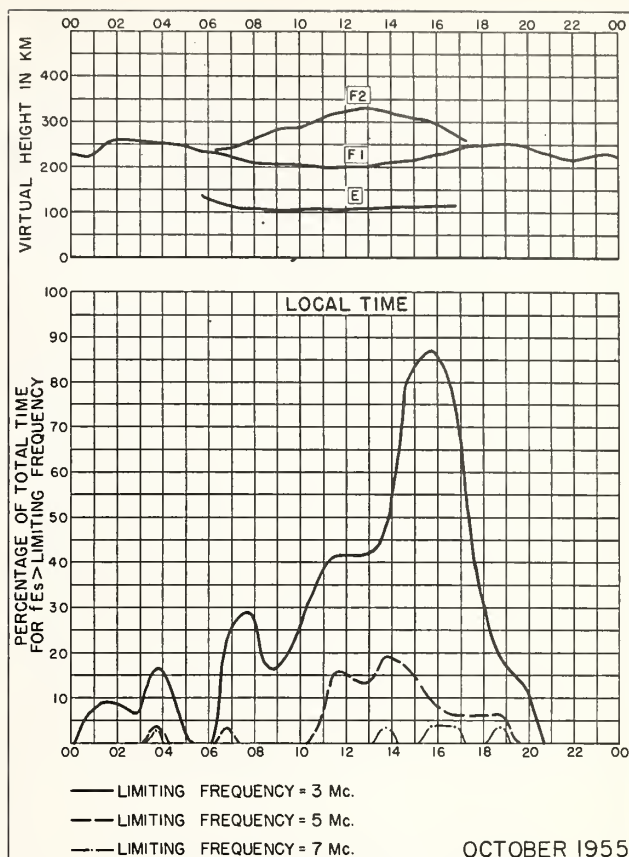


Fig. 58. ELISABETHVILLE, BELGIAN CONGO

NBS 490

U. S. GOVERNMENT PRINTING OFFICE: 1957

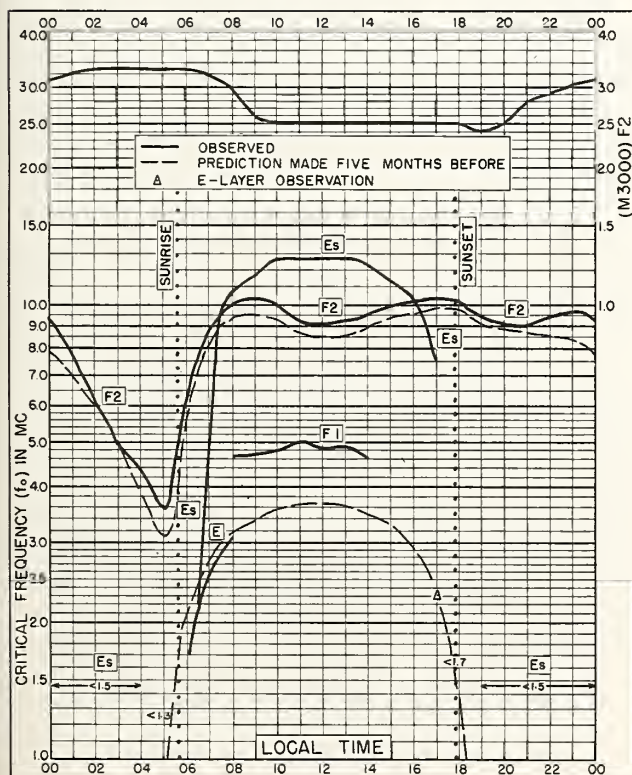


Fig. 59. HUANCAYO, PERU
12.0°S, 75.3°W
OCTOBER 1955

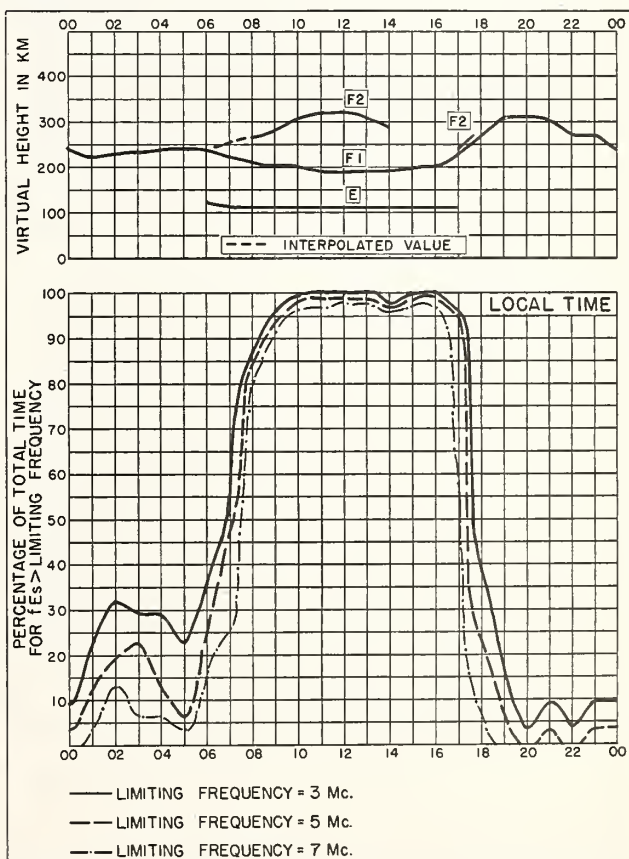


Fig. 60. HUANCAYO, PERU

OCTOBER 1955

NBS 490

U. S. GOVERNMENT PRINTING OFFICE: 1957

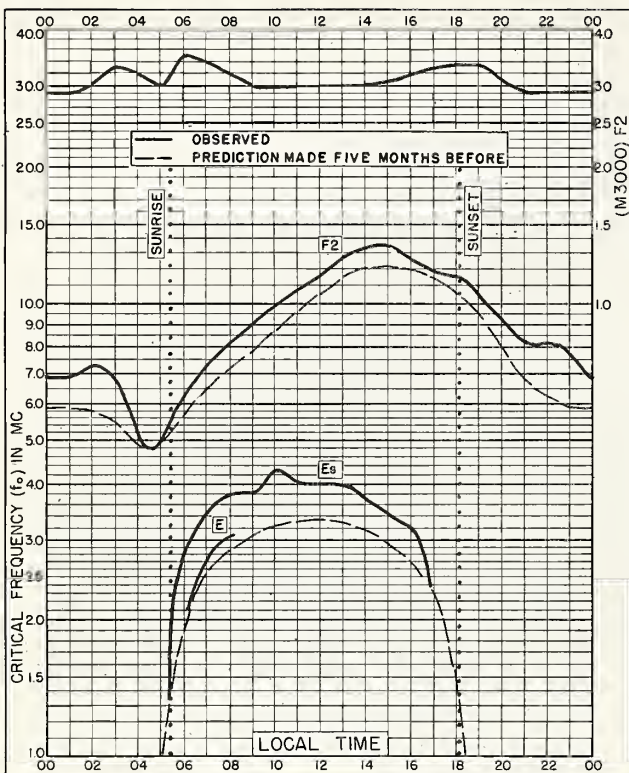


Fig. 61. BUENOS AIRES, ARGENTINA
34.5°S, 58.5°W OCTOBER 1955

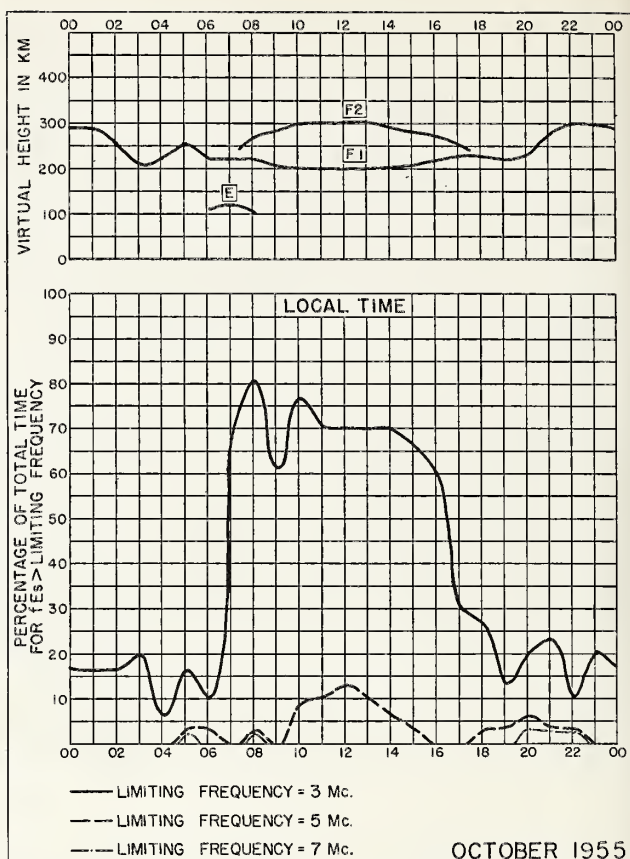


Fig. 62. BUENOS AIRES, ARGENTINA
OCTOBER 1955

NBS 490

U. S. GOVERNMENT PRINTING OFFICE 13377

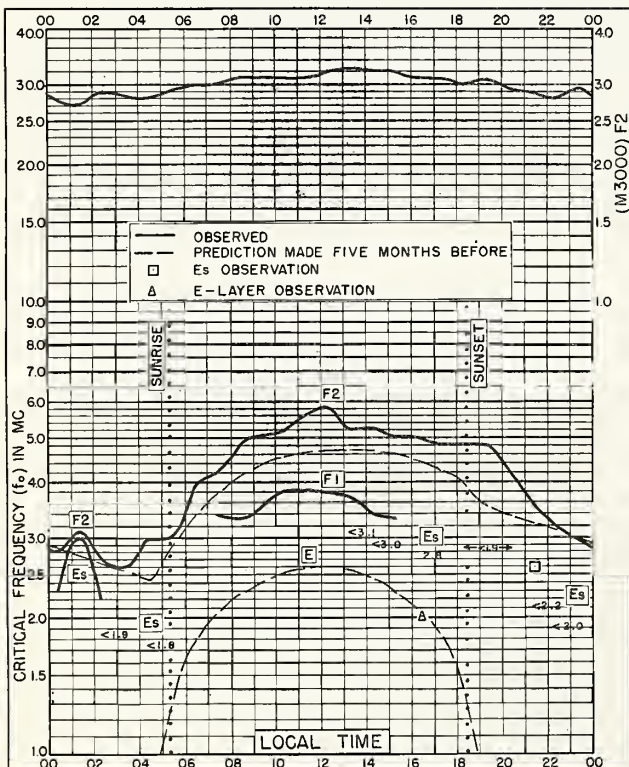


Fig. 63. KIRUNA, SWEDEN
67.8°N, 20.3°E SEPTEMBER 1955

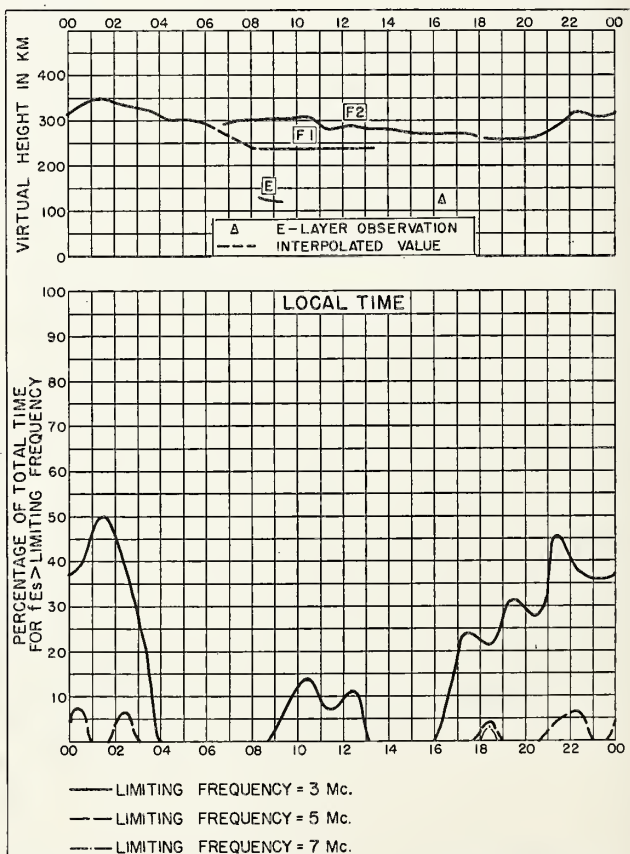


Fig. 64. KIRUNA, SWEDEN
SEPTEMBER 1955

NBS 490

U. S. GOVERNMENT PRINTING OFFICE 13377

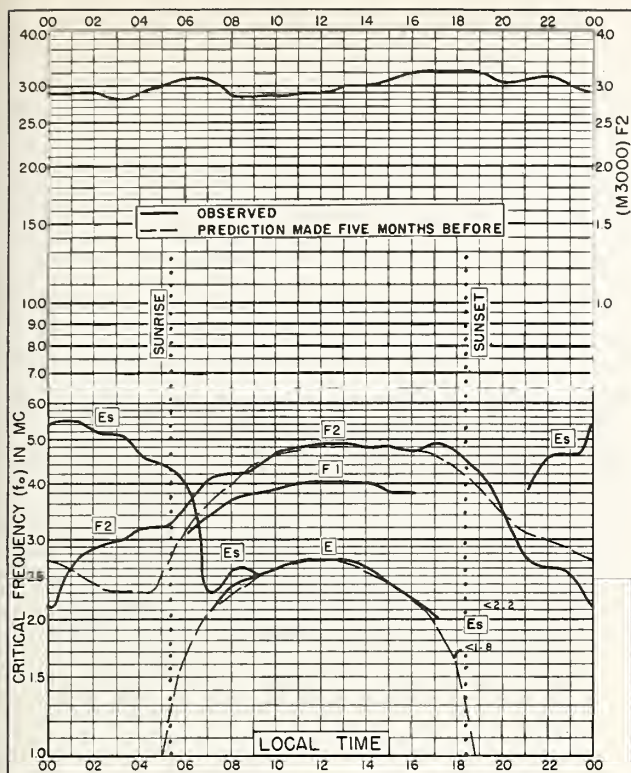


Fig. 65. FAIRBANKS, ALASKA
64.9°N, 147.8°W SEPTEMBER 1955

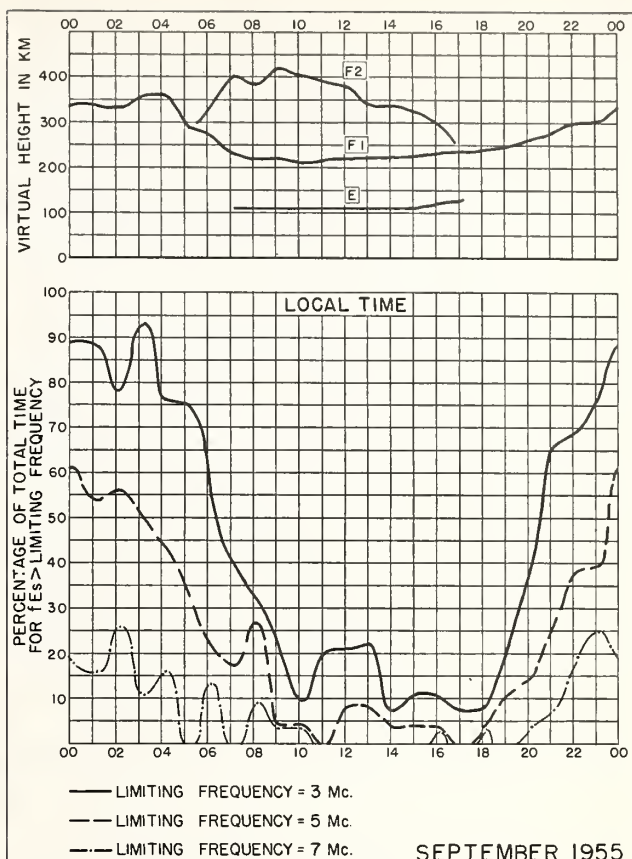


Fig. 66. FAIRBANKS, ALASKA
SEPTEMBER 1955

NBS 490

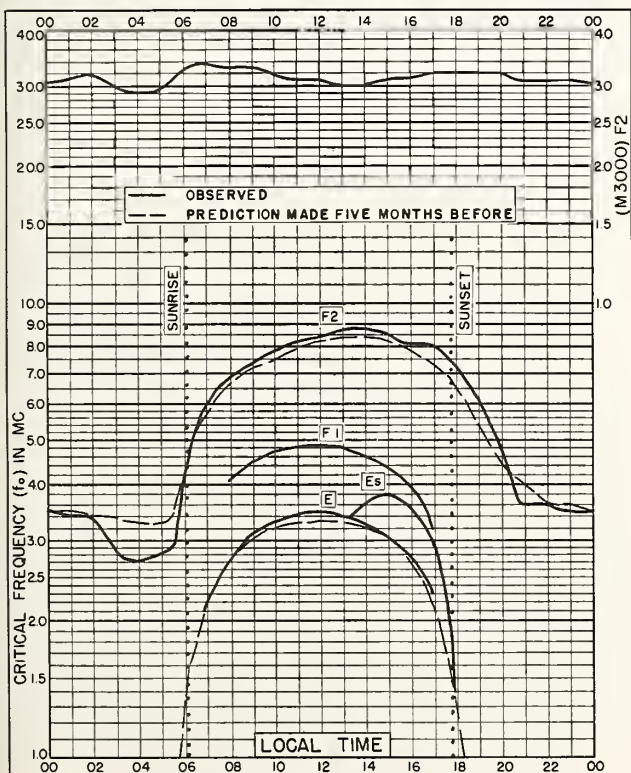


Fig. 67. JOHANNESBURG, UNION OF S. AFRICA
26.2°S, 28.1°E SEPTEMBER 1955

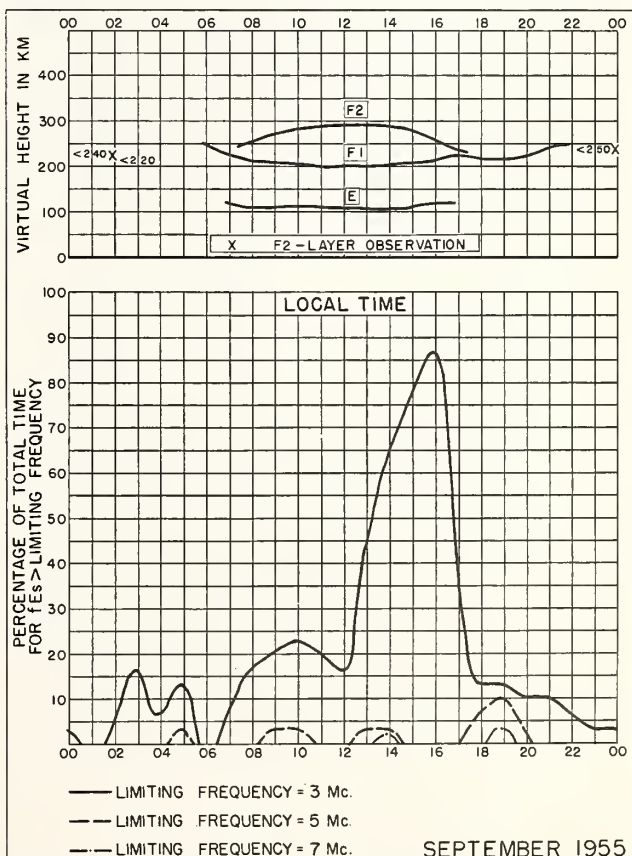


Fig. 68. JOHANNESBURG, UNION OF S. AFRICA
SEPTEMBER 1955

NBS 490

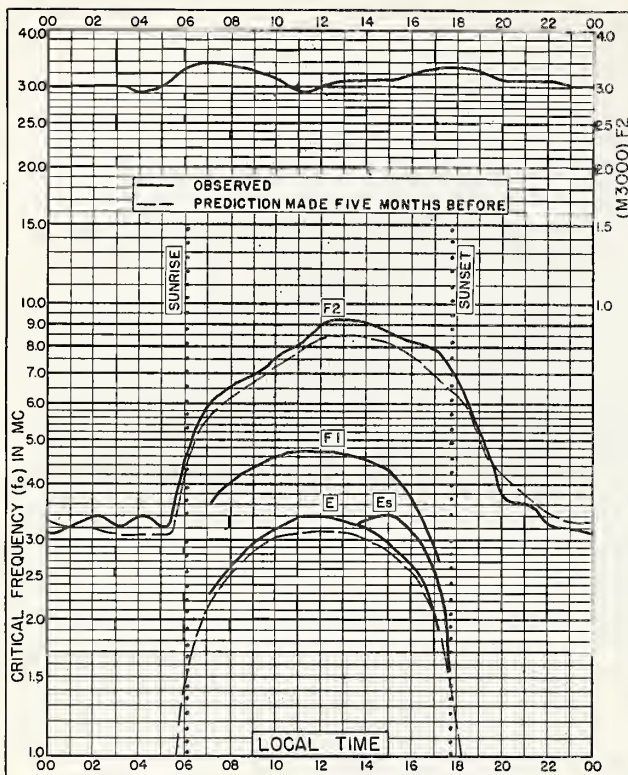


Fig. 69. CAPETOWN, UNION OF S. AFRICA
34. 2°S, 18. 3°E SEPTEMBER 1955

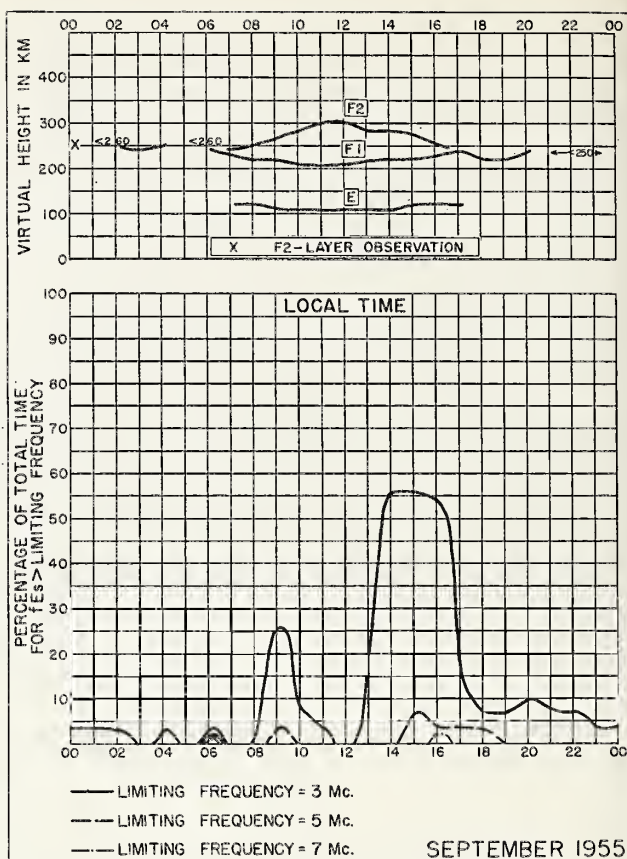


Fig. 70. CAPETOWN, UNION OF S. AFRICA

NBS 490

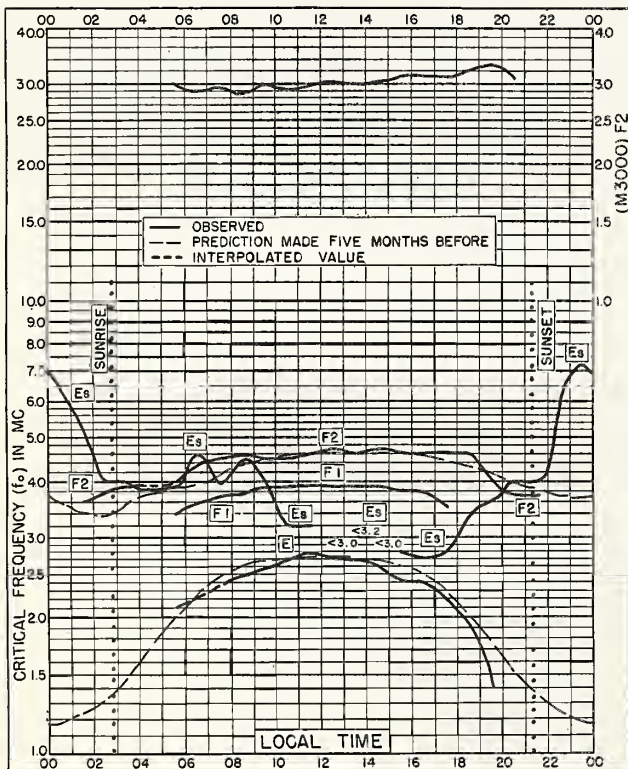


Fig. 71. POINT BARROW, ALASKA
71.3°N, 156.8°W AUGUST 1955

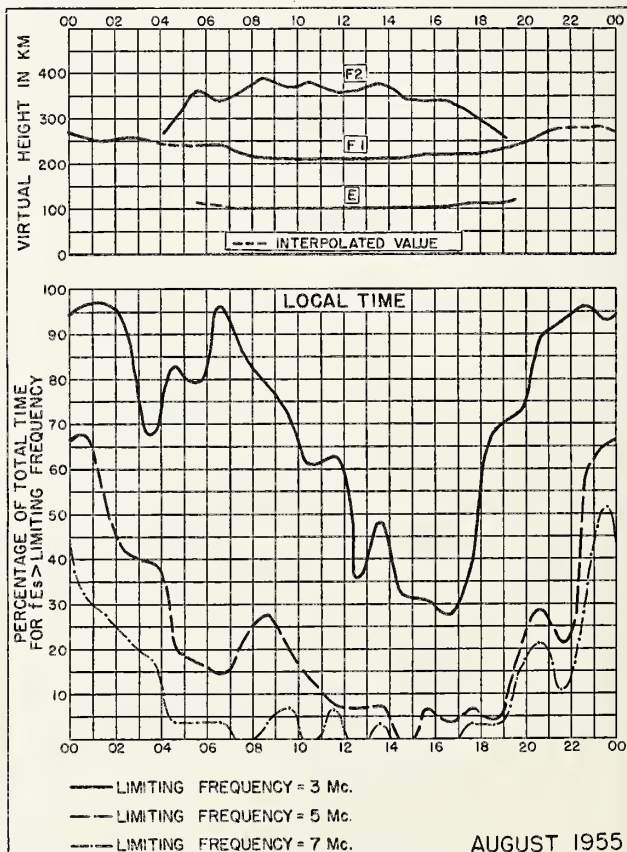


Fig. 72. POINT BARROW, ALASKA

NBS 490

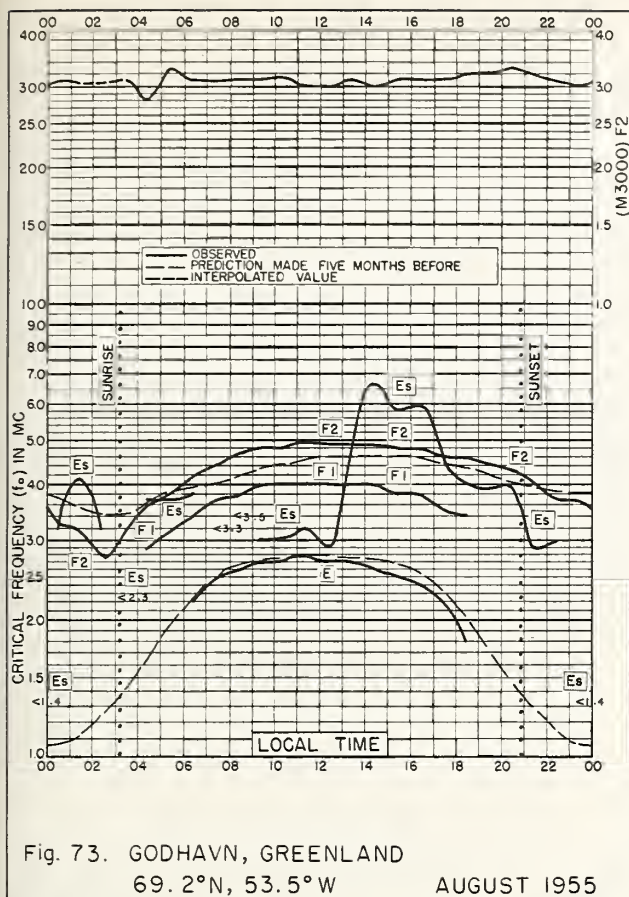


Fig. 73. GODHAVN, GREENLAND

69.2°N, 53.5°W

AUGUST 1955

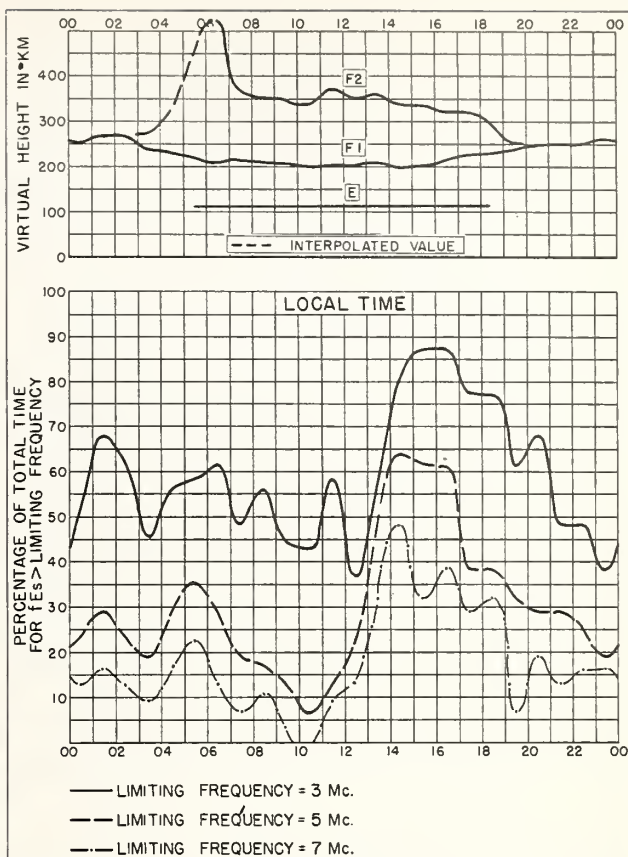


Fig. 74. GODHAVN, GREENLAND

AUGUST 1955

NBS 490

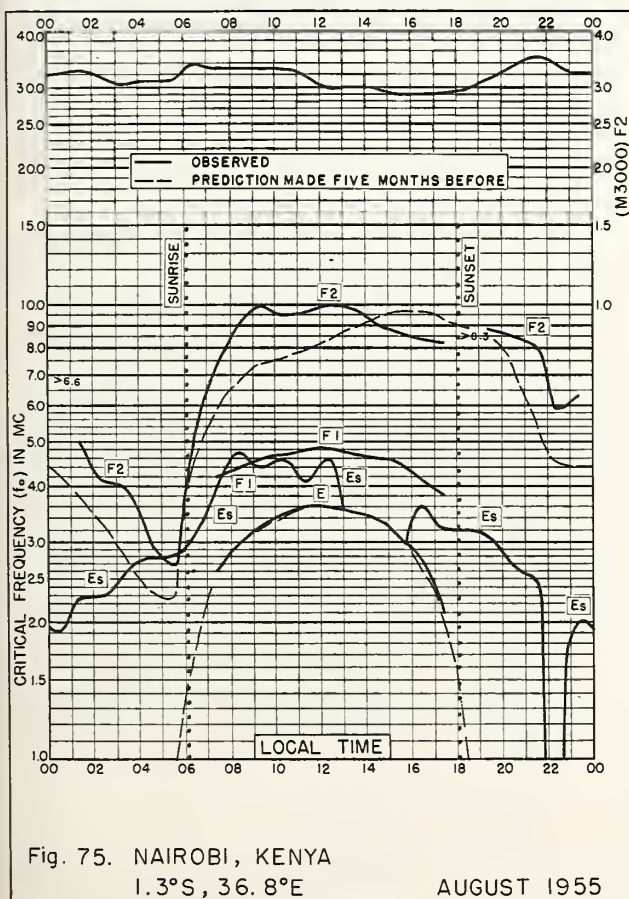


Fig. 75. NAIROBI, KENYA

1.3°S, 36.8°E

AUGUST 1955

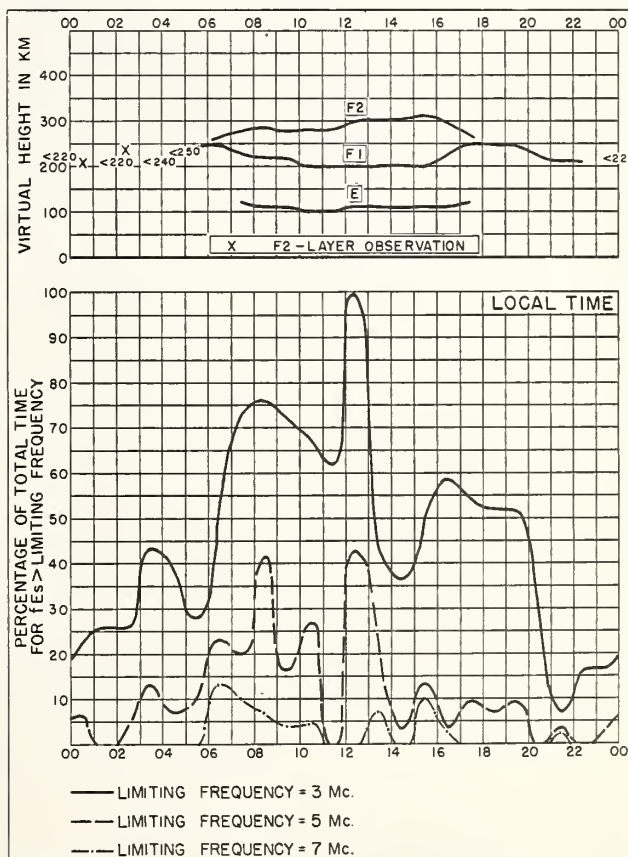


Fig. 76. NAIROBI, KENYA

AUGUST 1955

NBS 490

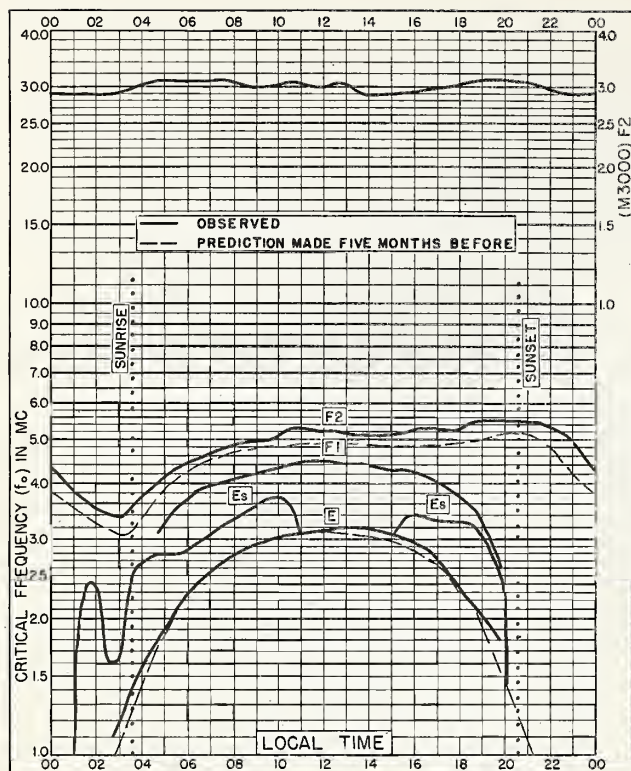


Fig. 77. INVERNESS, SCOTLAND
57.4°N, 4.2°W

JULY 1955

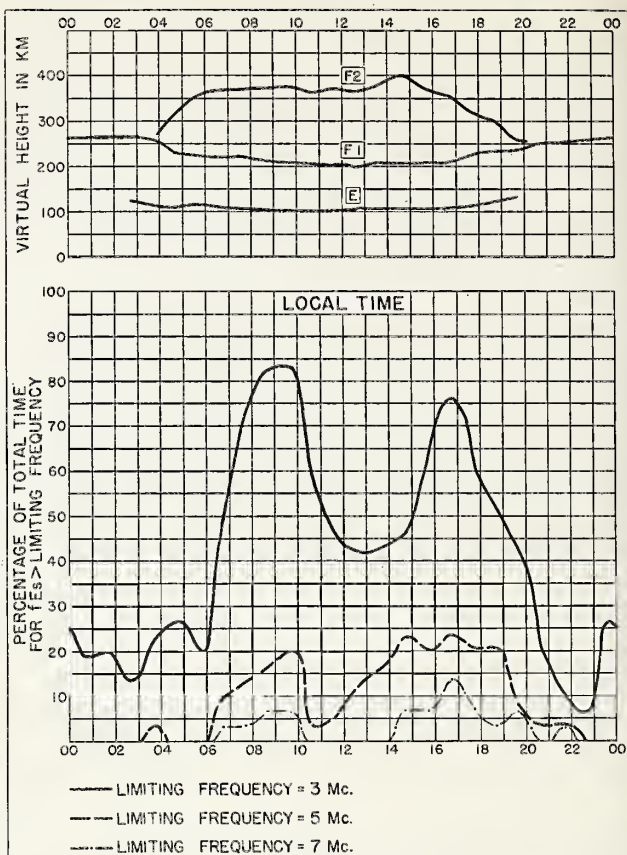


Fig. 78. INVERNESS, SCOTLAND

JULY 1955

NBS 490

U.S. GOVERNMENT PRINTING OFFICE: 1957

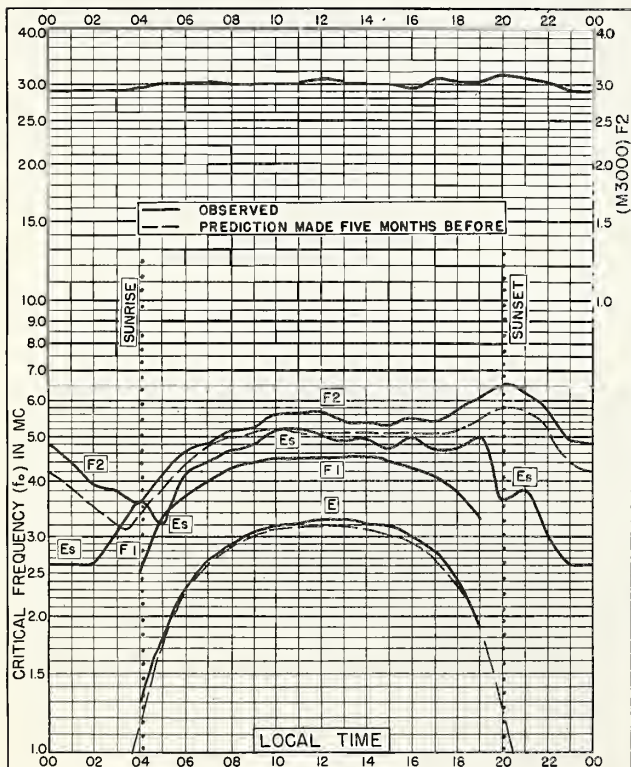


Fig. 79. SLOUGH, ENGLAND
51.5°N, 0.6°W

JULY 1955

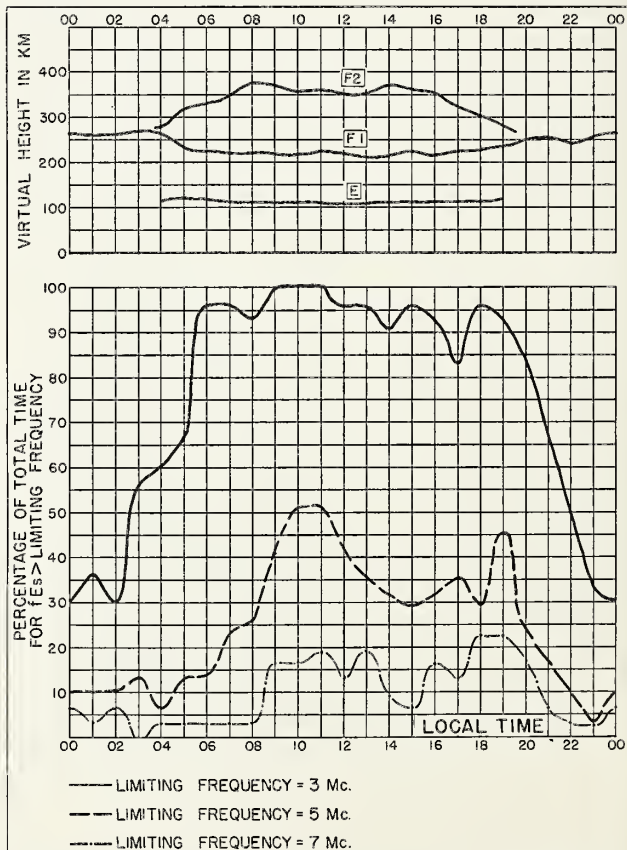


Fig. 80. SLOUGH, ENGLAND

JULY 1955

NBS 490

U.S. GOVERNMENT PRINTING OFFICE: 1957

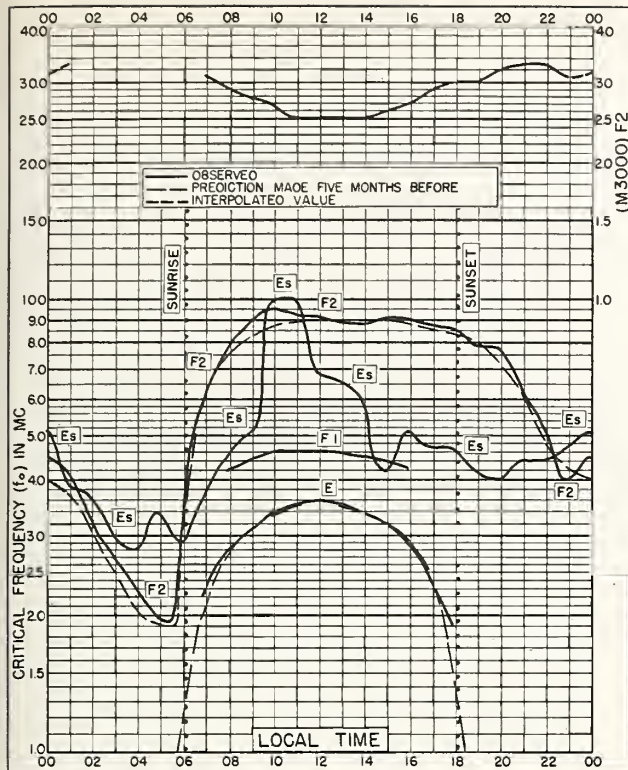


Fig. 81. SINGAPORE, BRITISH MALAYA
1.3°N, 103.8°E
JULY 1955

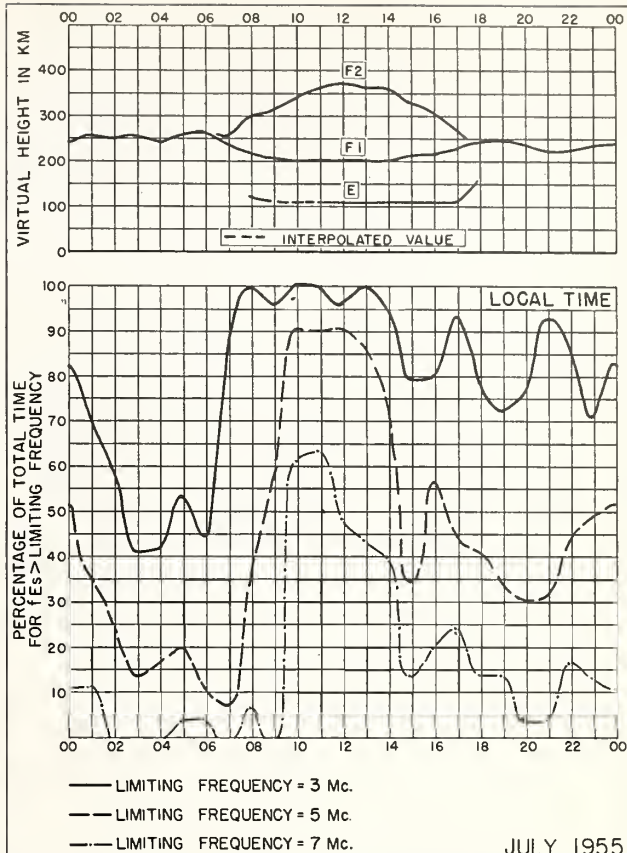


Fig. 82. SINGAPORE, BRITISH MALAYA

JULY 1955

NBS 490

A. R. APPENDIX: IONOSPHERIC DATA

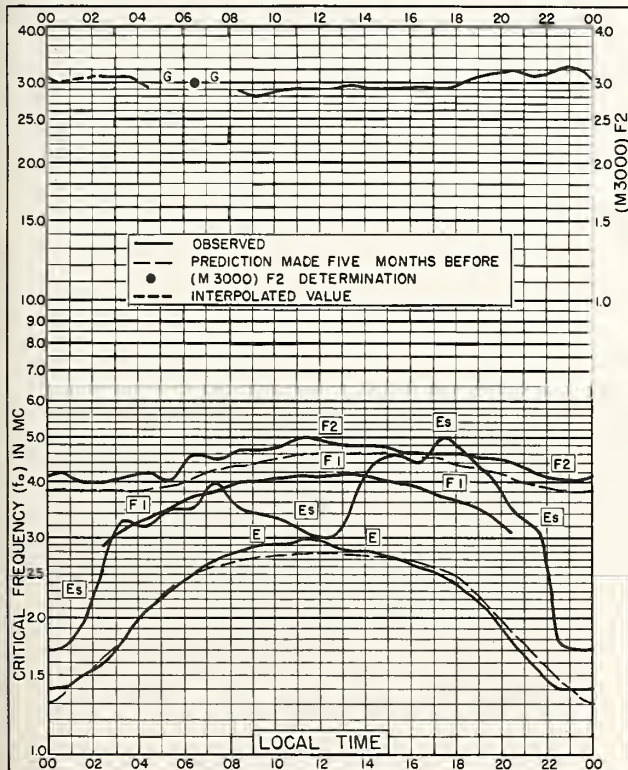


Fig. 83. GODHAVN, GREENLAND
69.2°N, 53.5°W
JUNE 1955

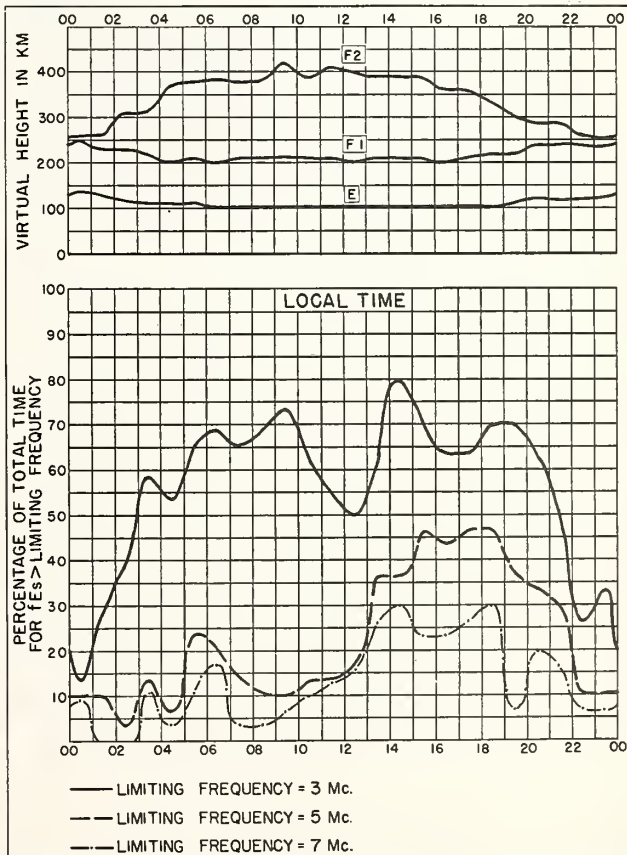


Fig. 84. GODHAVN, GREENLAND

JUNE 1955

NBS 490

A. R. APPENDIX: IONOSPHERIC DATA

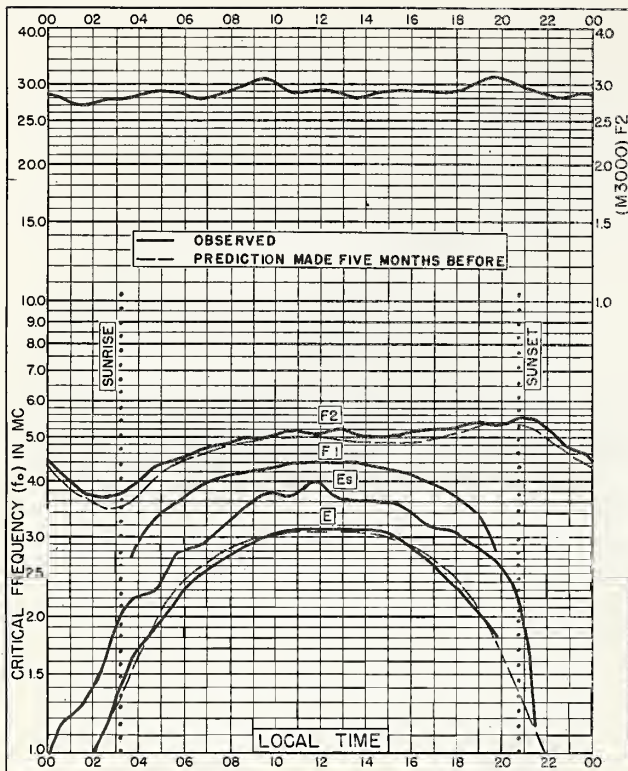


Fig. 85. INVERNESS, SCOTLAND
57.4°N, 4.2°W

JUNE 1955

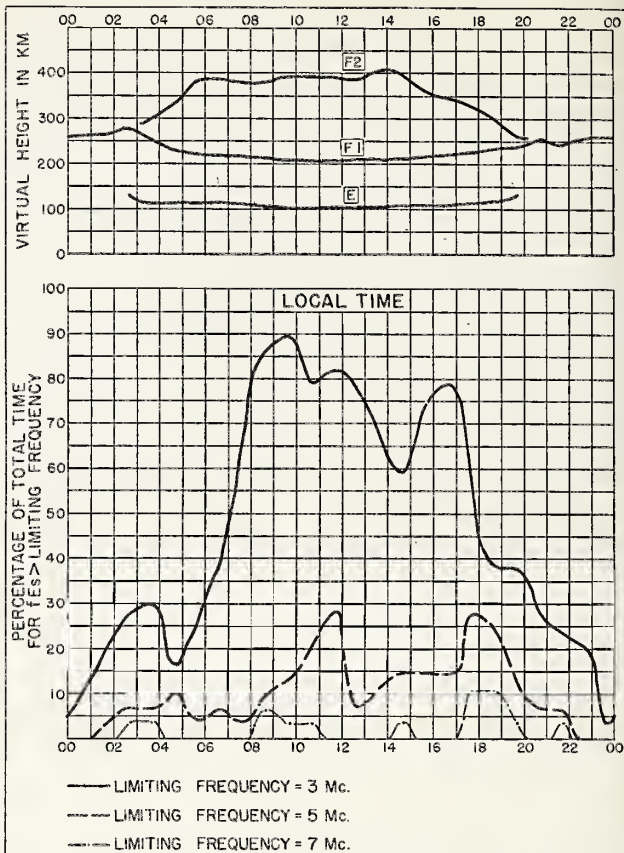


Fig. 86. INVERNESS, SCOTLAND

JUNE 1955

NBS 490

U. S. GOVERNMENT PRINTING OFFICE: 1957

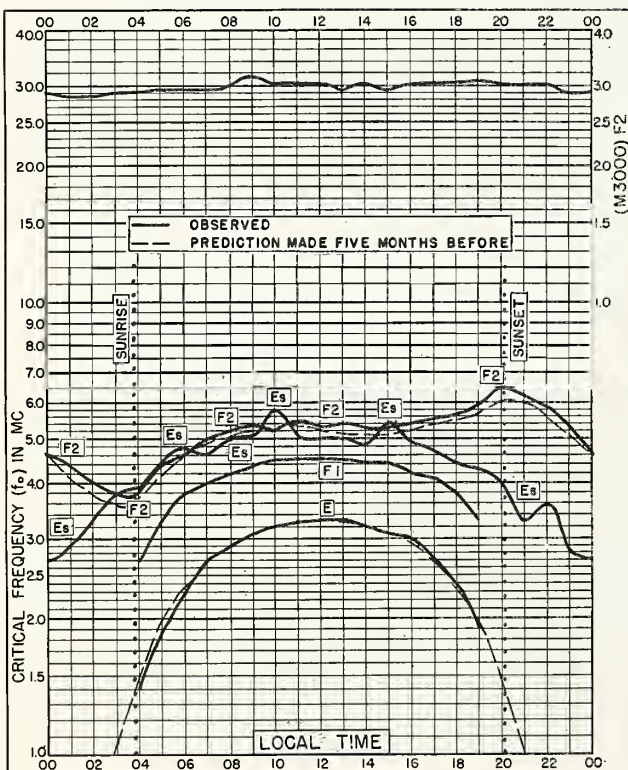


Fig. 87. SLOUGH, ENGLAND
51.5°N, 0.6°W

JUNE 1955

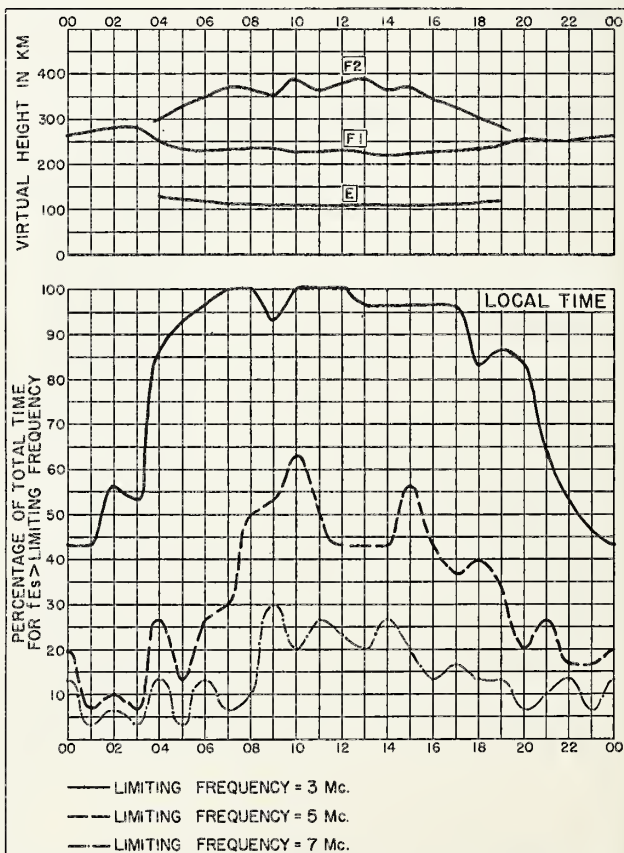


Fig. 88. SLOUGH, ENGLAND

JUNE 1955

NBS 490

U. S. GOVERNMENT PRINTING OFFICE: 1957

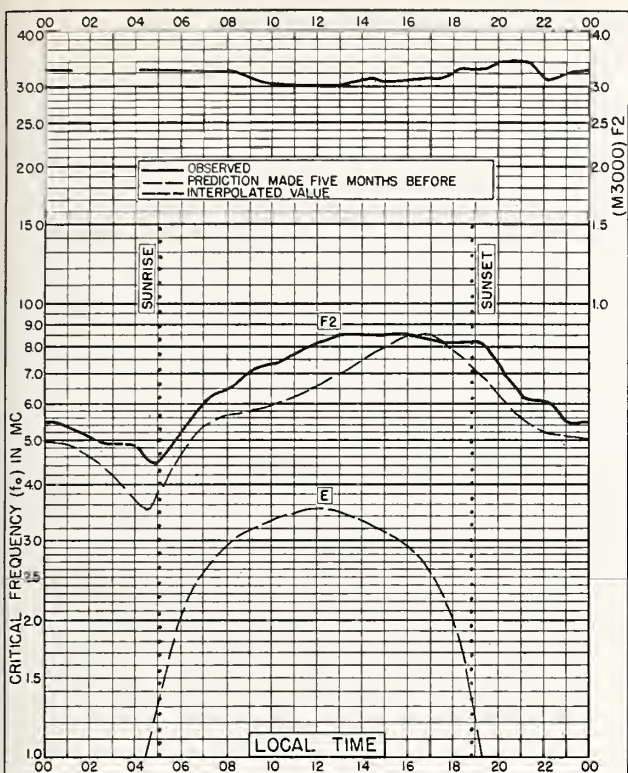


Fig. 89. DELHI, INDIA
28.6°N, 77.1°E

JUNE 1955

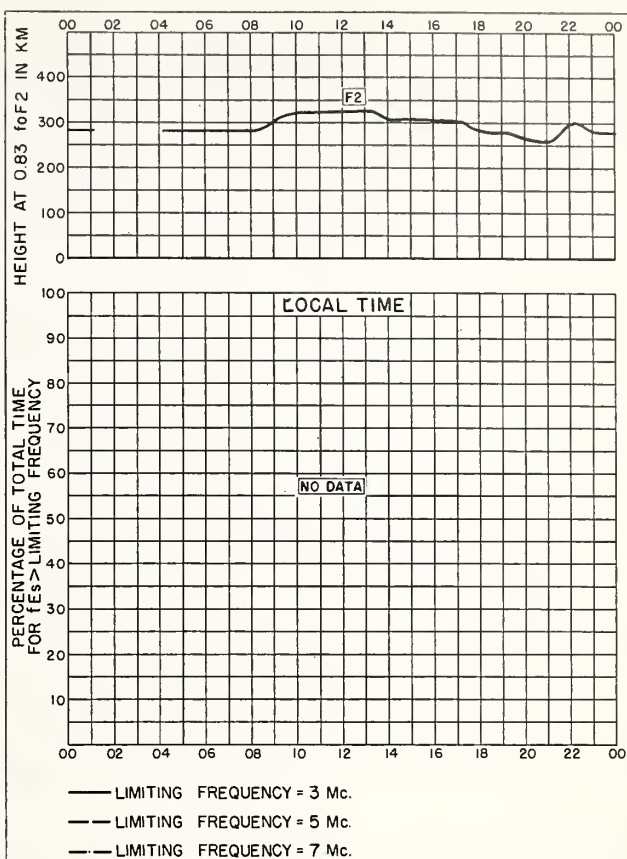


Fig. 90. DELHI, INDIA

JUNE 1955

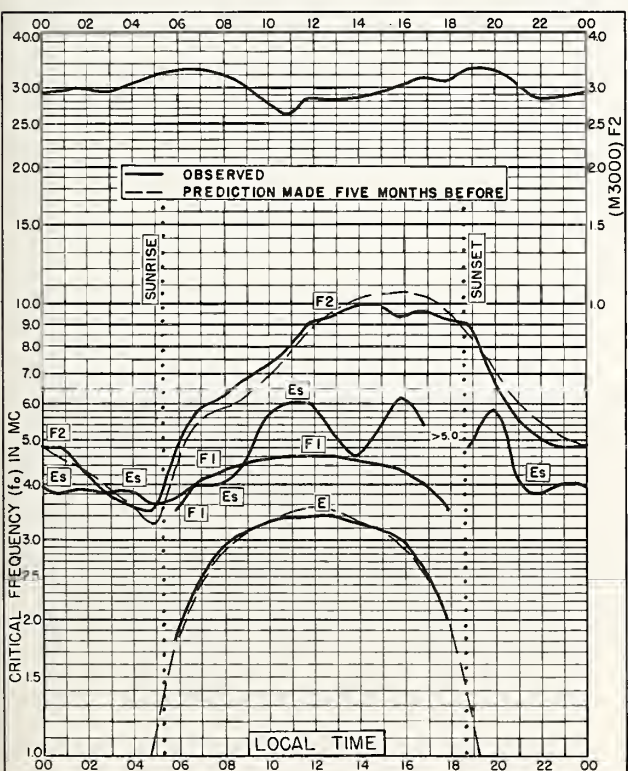


Fig. 91. AHMEDABAD, INDIA
23.0°N, 72.6°E

JUNE 1955

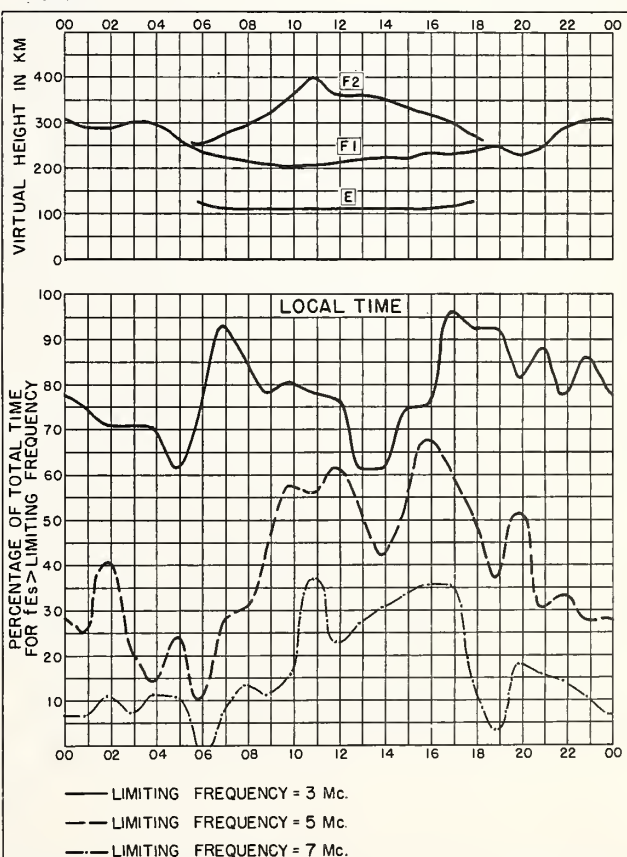


Fig. 92. AHMEDABAD, INDIA

JUNE 1955

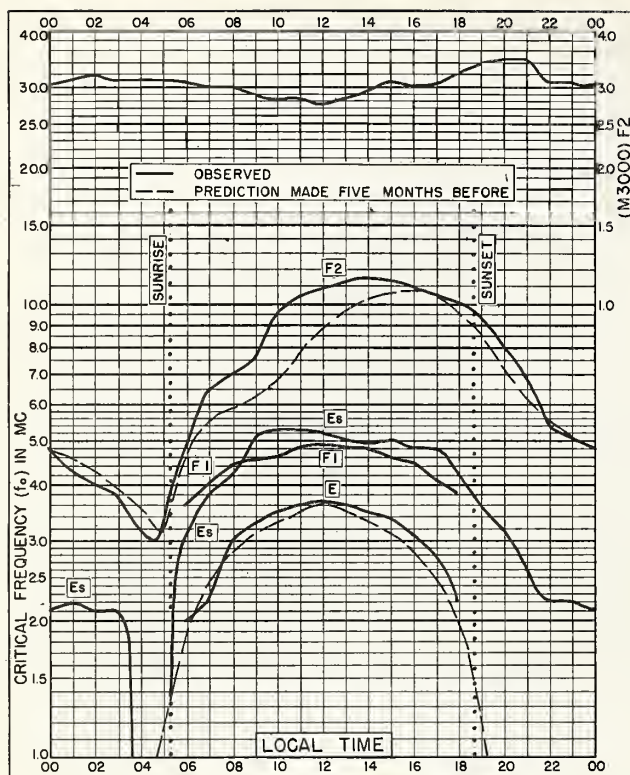


Fig. 93. CALCUTTA, INDIA
22.9°N, 88.5°E

JUNE 1955

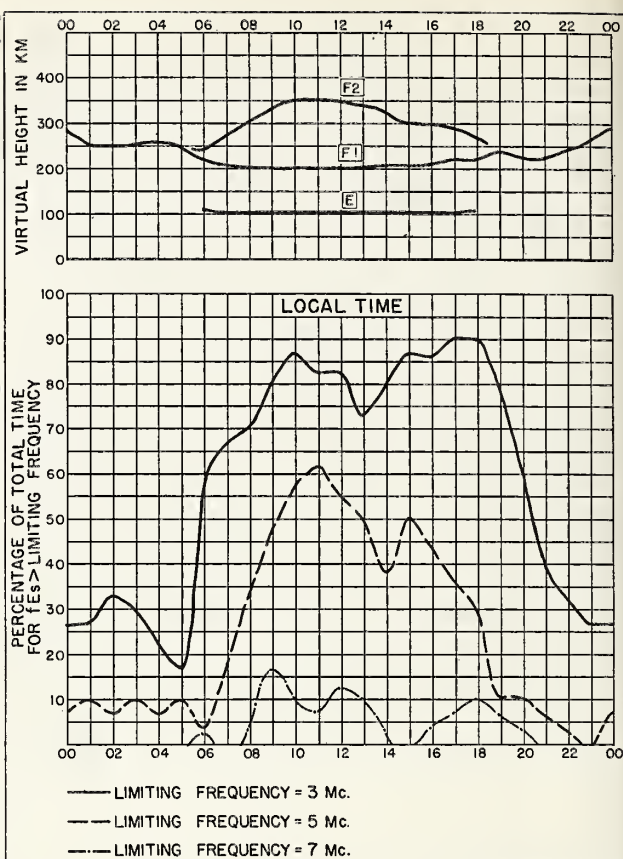


Fig. 94. CALCUTTA, INDIA

JUNE 1955

NBS 490

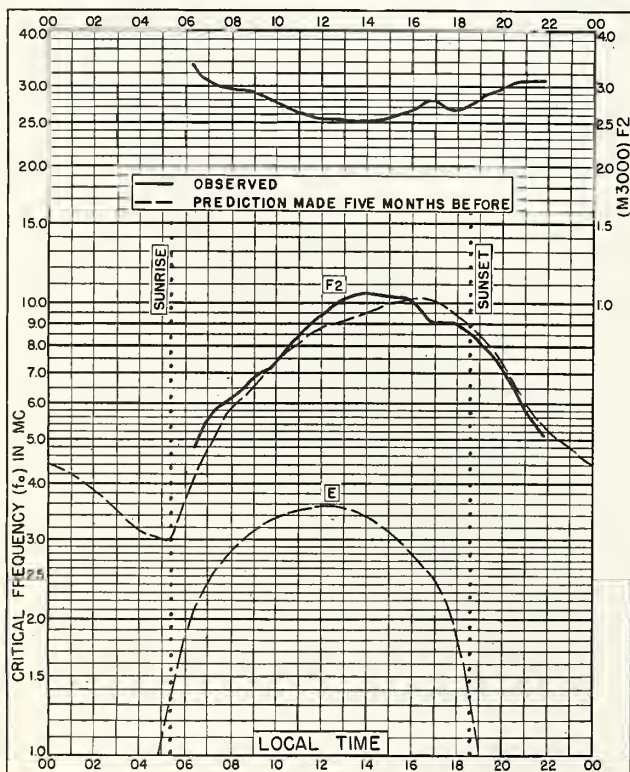


Fig. 95. BOMBAY, INDIA
19.0°N, 73.0°E

JUNE 1955

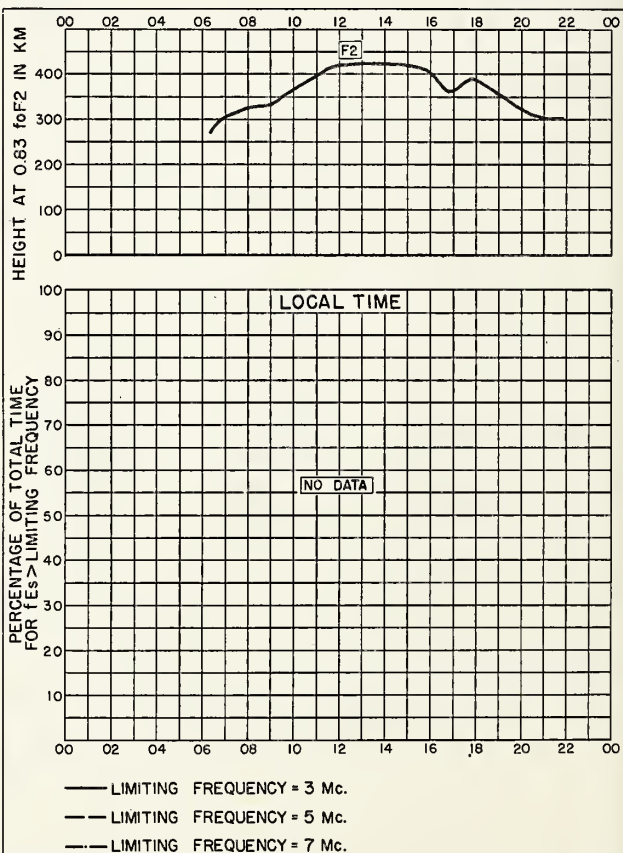


Fig. 96. BOMBAY, INDIA

JUNE 1955

NBS 490

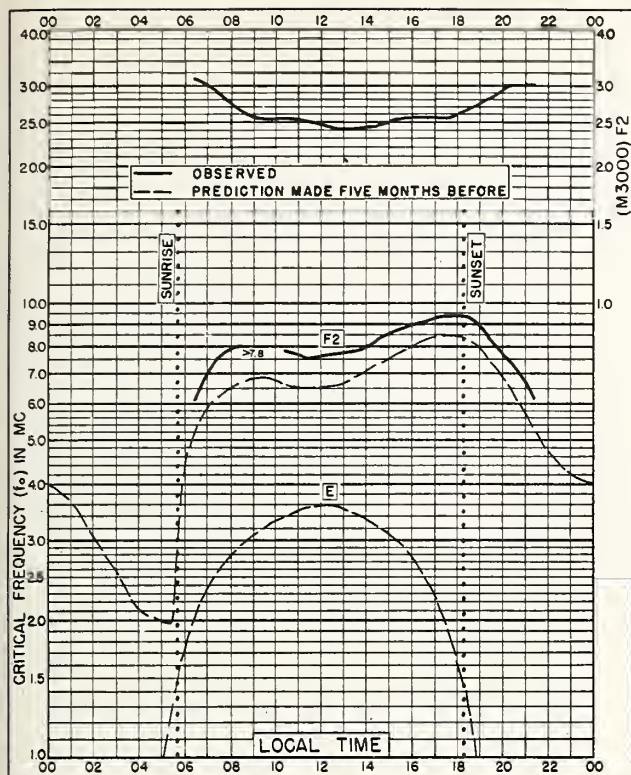


Fig. 97. MADRAS, INDIA
13.0°N, 80.2°E

JUNE 1955

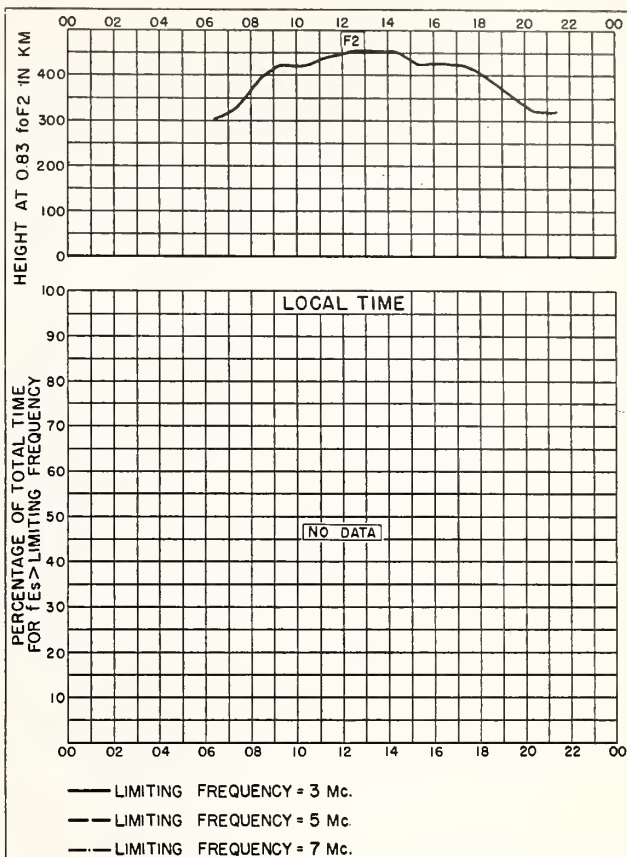


Fig. 98. MADRAS, INDIA

JUNE 1955

NBS 490

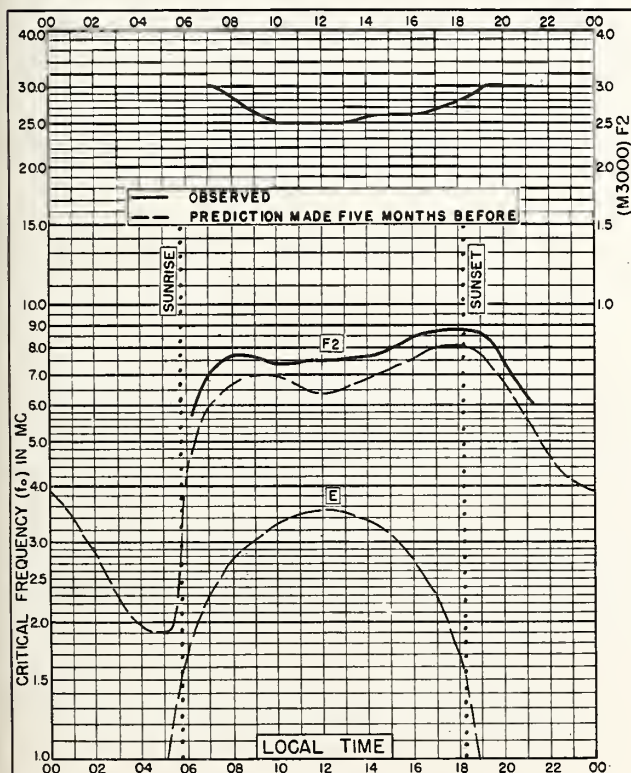


Fig. 99. TIRUCHY, INDIA
10.8°N, 78.8°E

JUNE 1955

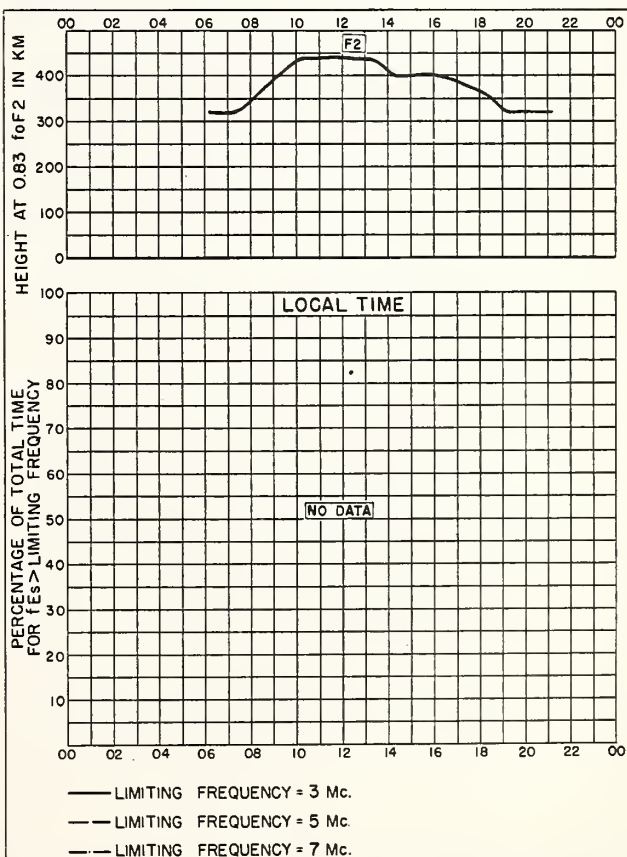


Fig. 100. TIRUCHY, INDIA

JUNE 1955

NBS 490

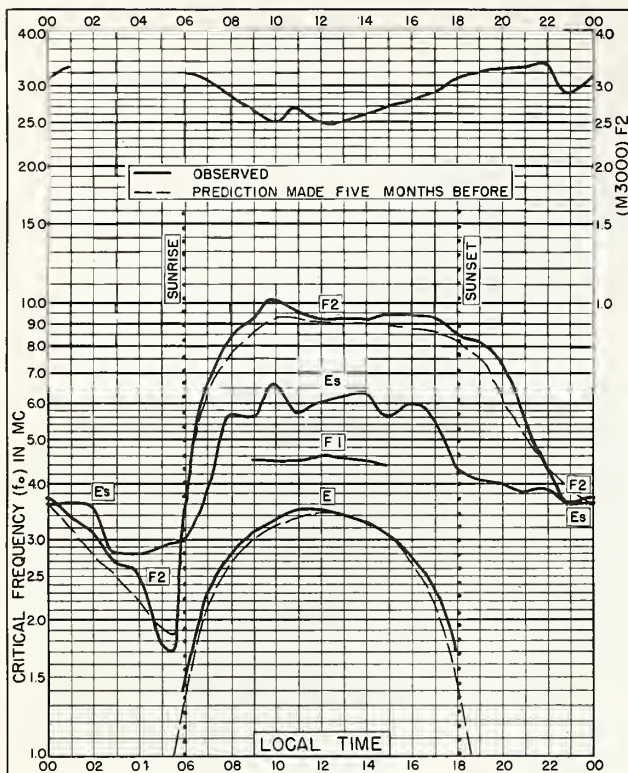


Fig. 101. SINGAPORE, BRITISH MALAYA
1.3°N, 103.8°E
JUNE 1955

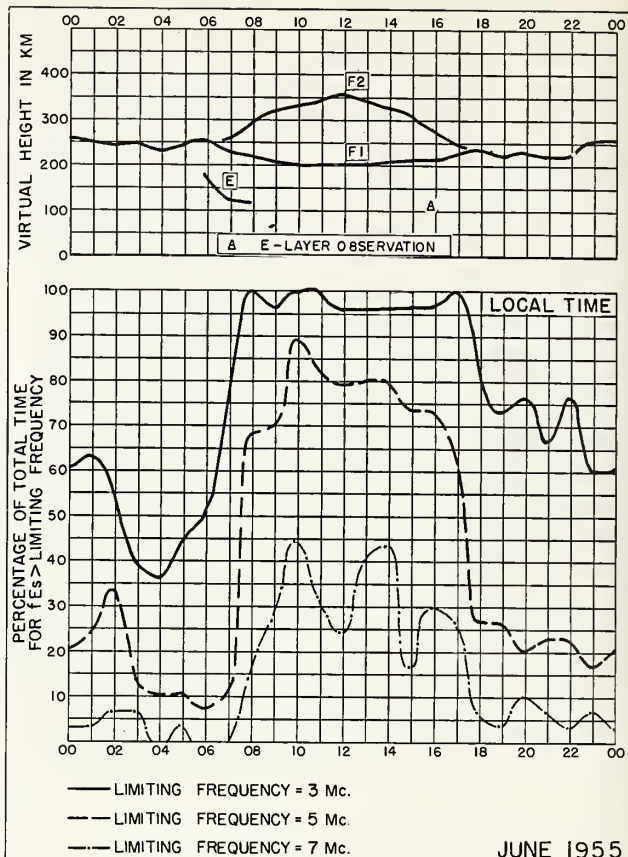


Fig. 102. SINGAPORE, BRITISH MALAYA
JUNE 1955

NBS 490

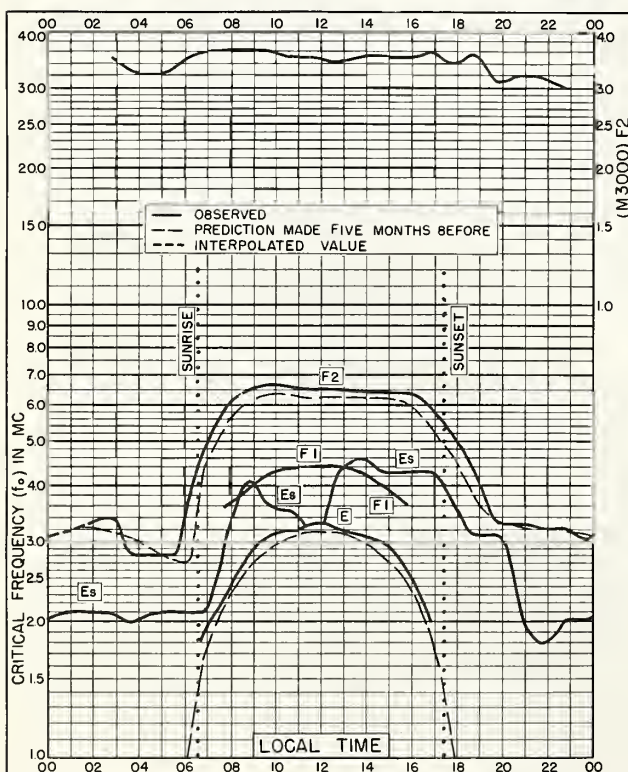


Fig. 103. TOWNSVILLE, AUSTRALIA
19.3°S, 146.7°E
JUNE 1955

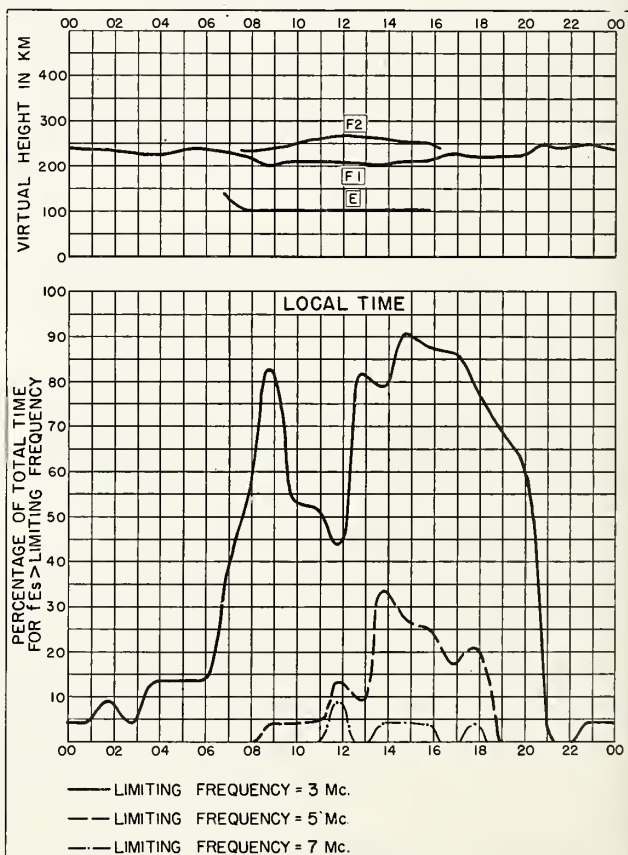


Fig. 104. TOWNSVILLE, AUSTRALIA
JUNE 1955

NBS 490

U. S. AIR FORCE RESEARCH OFFICE 11-5777

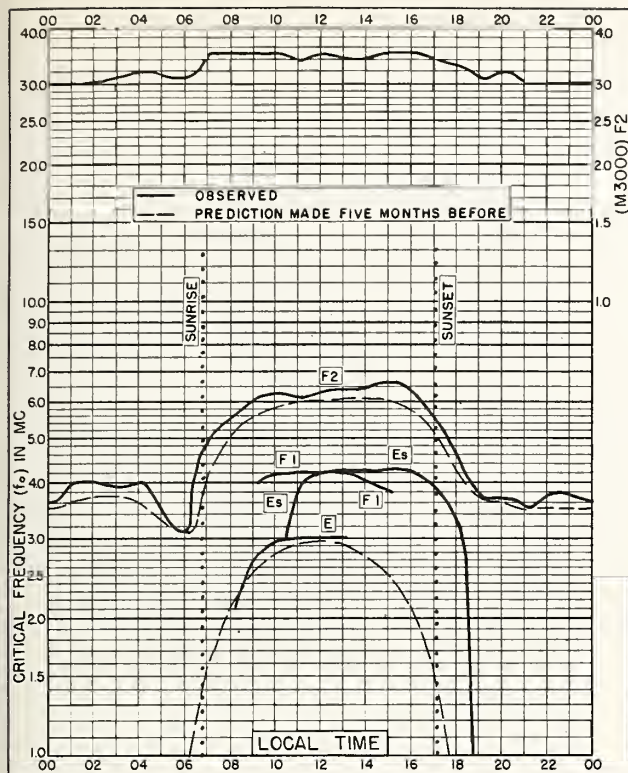


Fig. 105. BRISBANE, AUSTRALIA
27.5°S, 153.0°E

JUNE 1955

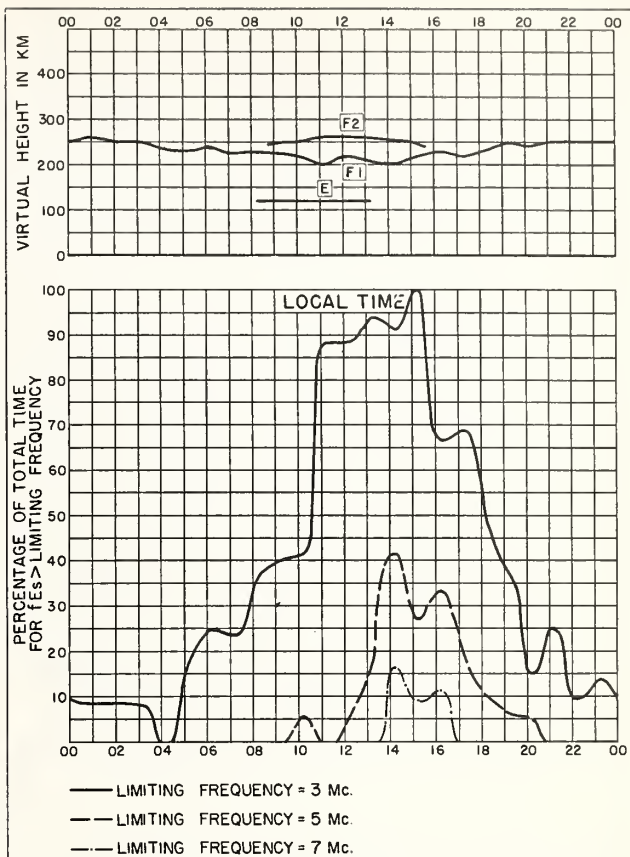


Fig. 106. BRISBANE, AUSTRALIA

JUNE 1955

NBS 490

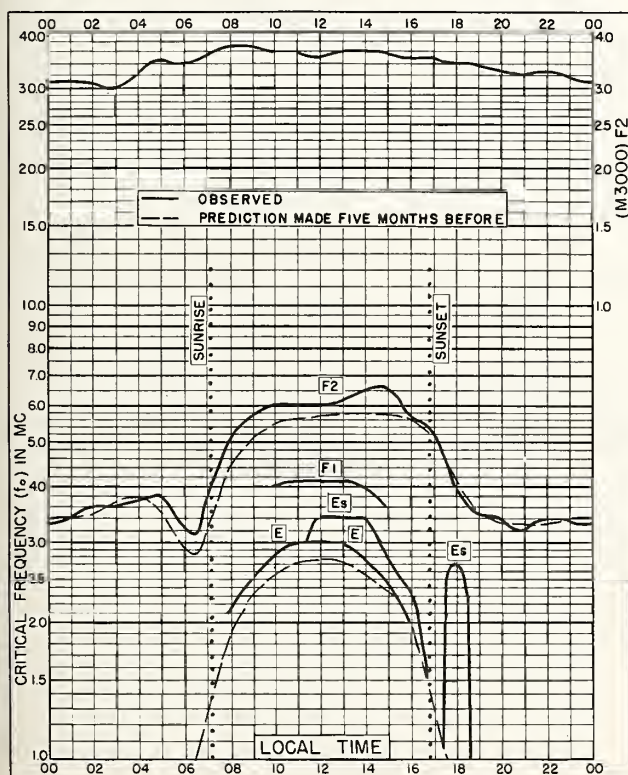


Fig. 107. CANBERRA, AUSTRALIA
35.3°S, 149.0°E

JUNE 1955

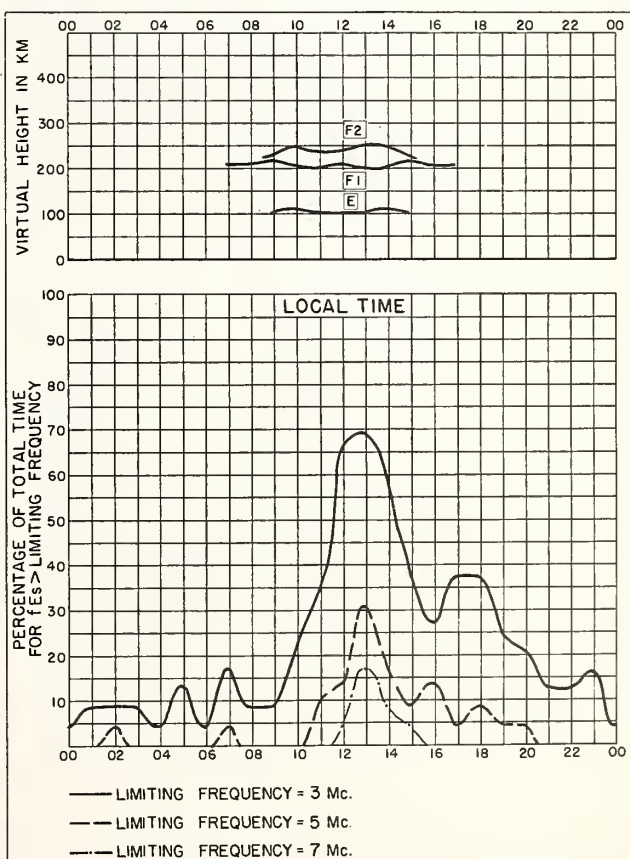


Fig. 108. CANBERRA, AUSTRALIA

JUNE 1955

NBS 490

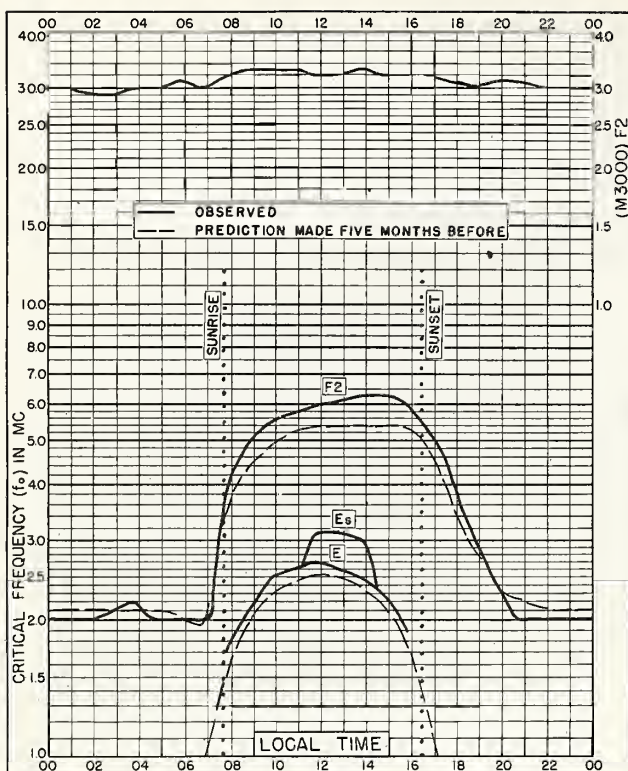


Fig. 109. HOBART, TASMANIA
42.9°S, 147.3°E

JUNE 1955

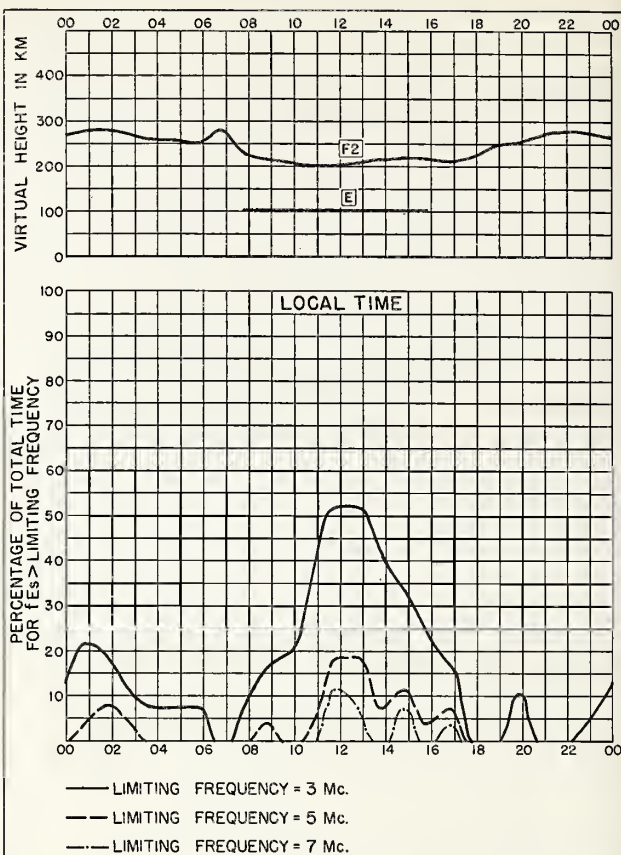


Fig. 110. HOBART, TASMANIA

JUNE 1955

NBS 490

U. S. GOVERNMENT PRINTING OFFICE: 1957

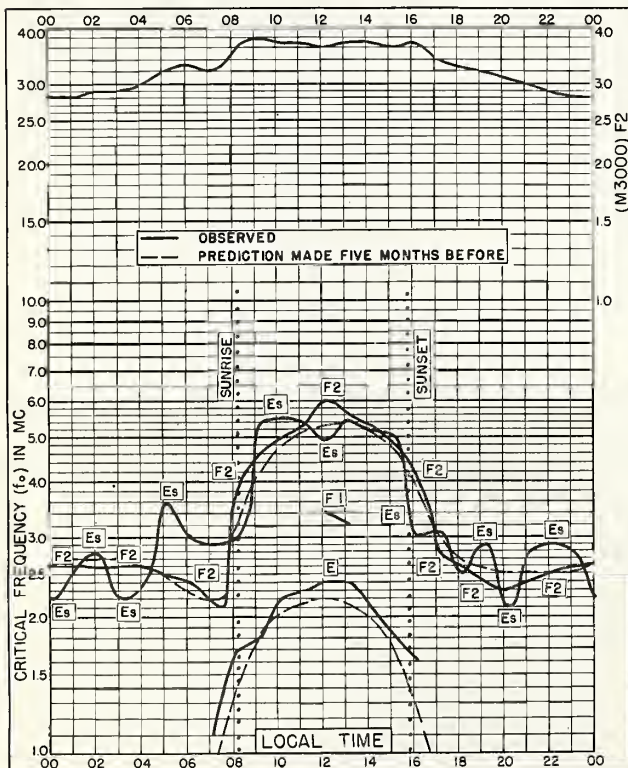


Fig. 111. FALKLAND IS.
51.7°S, 57.8°W

JUNE 1955

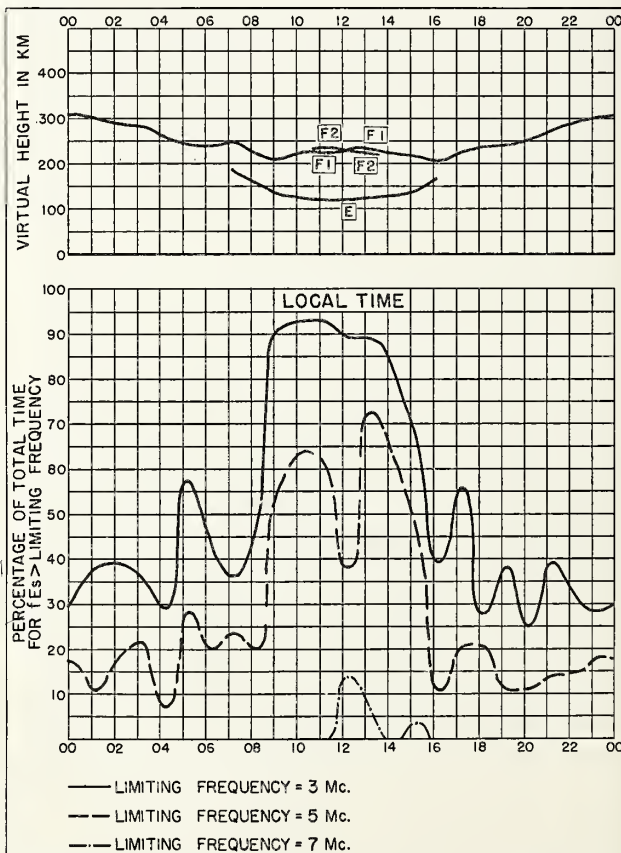


Fig. 112. FALKLAND IS.

JUNE 1955

NBS 490

U. S. GOVERNMENT PRINTING OFFICE: 1957

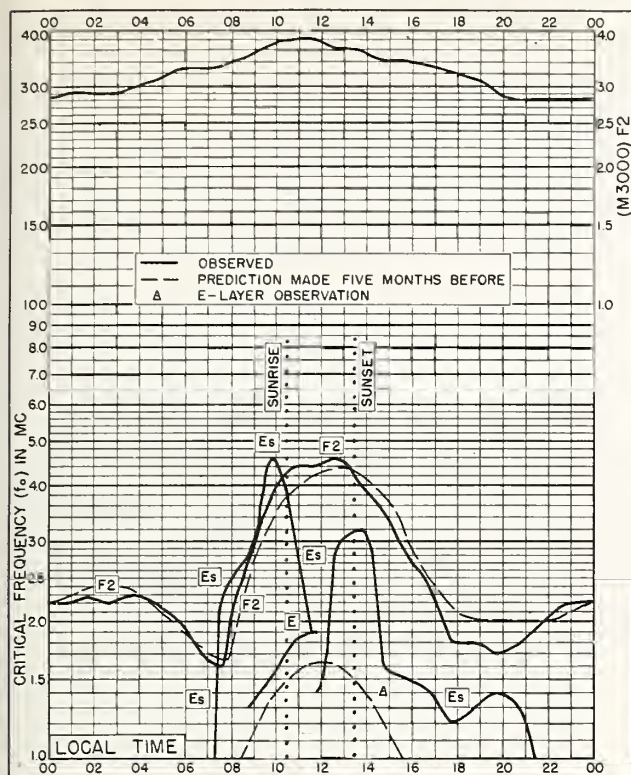


Fig. 113. PORT LOCKROY
64.8°S, 63.5°W

JUNE 1955

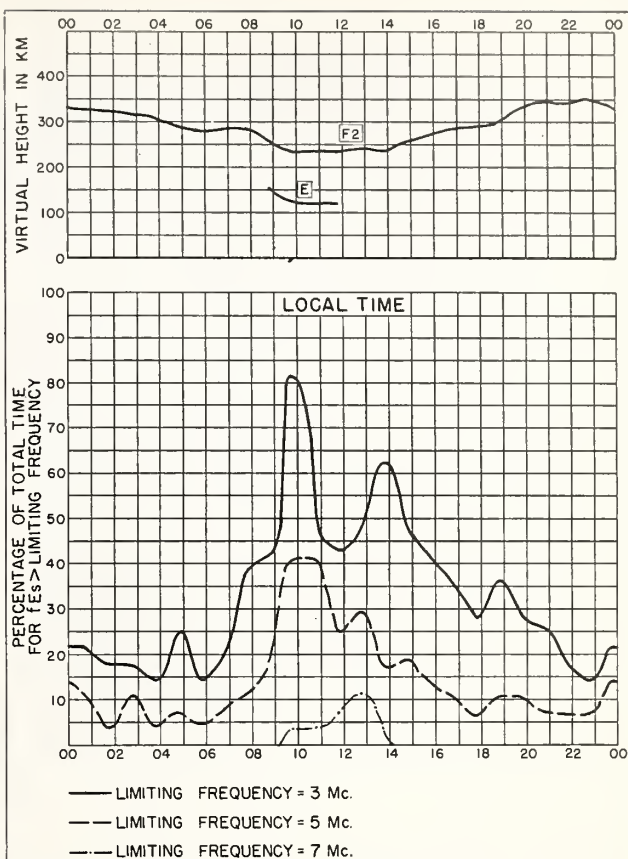


Fig. 114. PORT LOCKROY

JUNE 1955

NBS 490

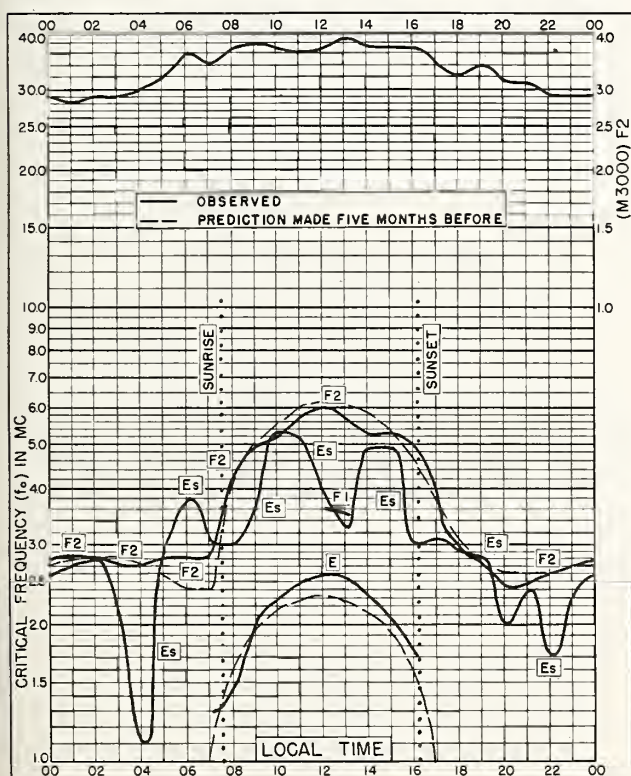


Fig. 115. FALKLAND IS.
51.7°S, 57.8°W

MAY 1955

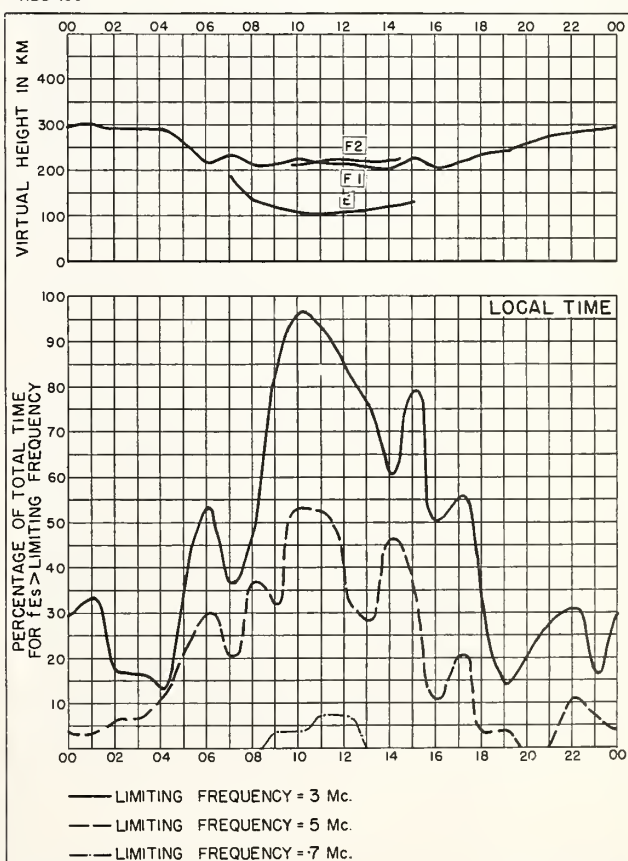


Fig. 116. FALKLAND IS.

MAY 1955

NBS 490

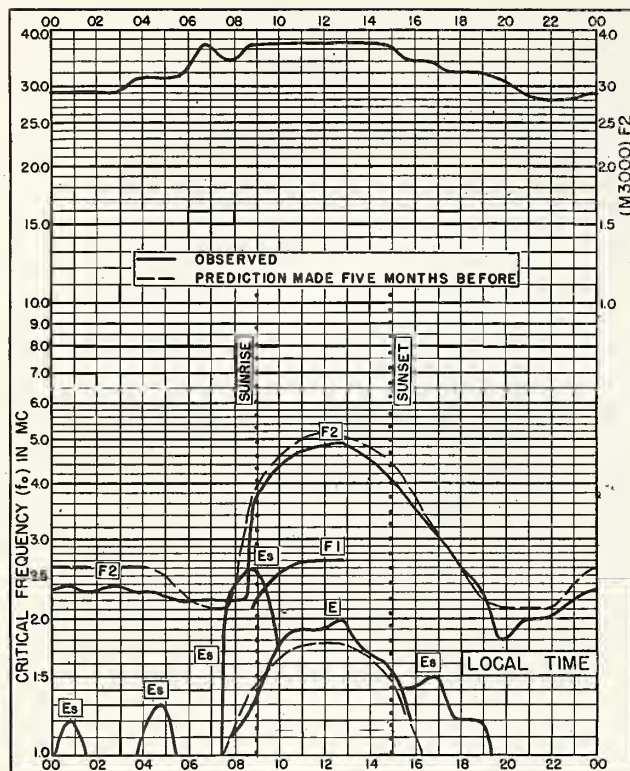


Fig. 117. PORT LOCKROY
64.8°S, 63.5°W

MAY 1955

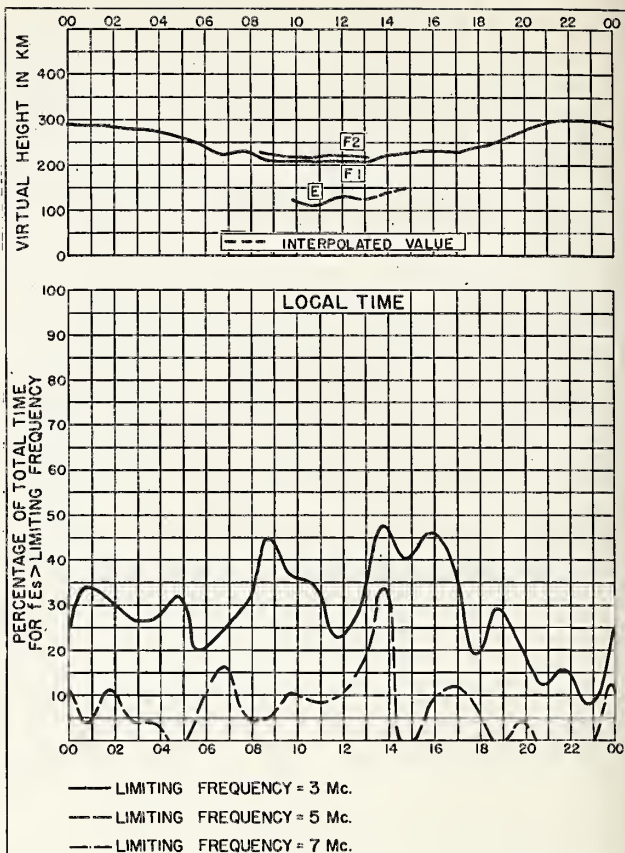


Fig. 118. PORT LOCKROY

MAY 1955

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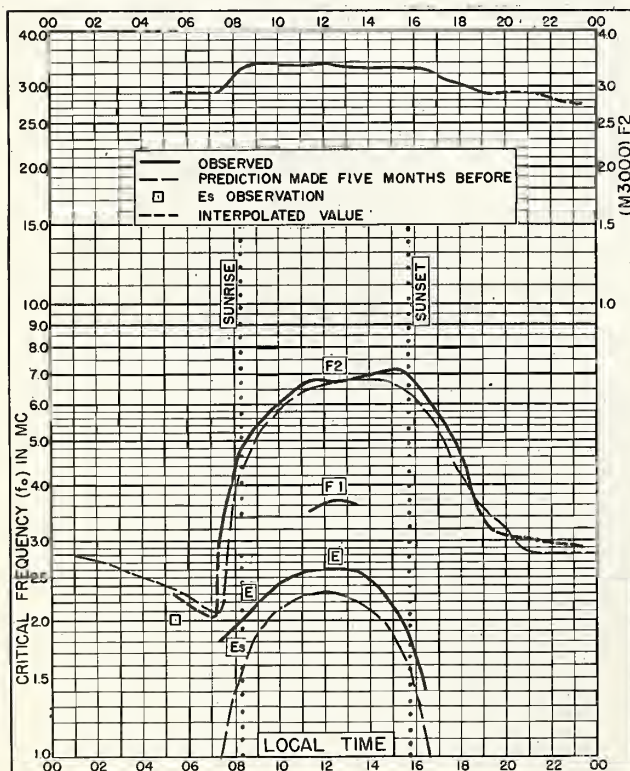


Fig. 119. CAMPBELL I.
52.5°S, 169.2°E

JUNE 1951

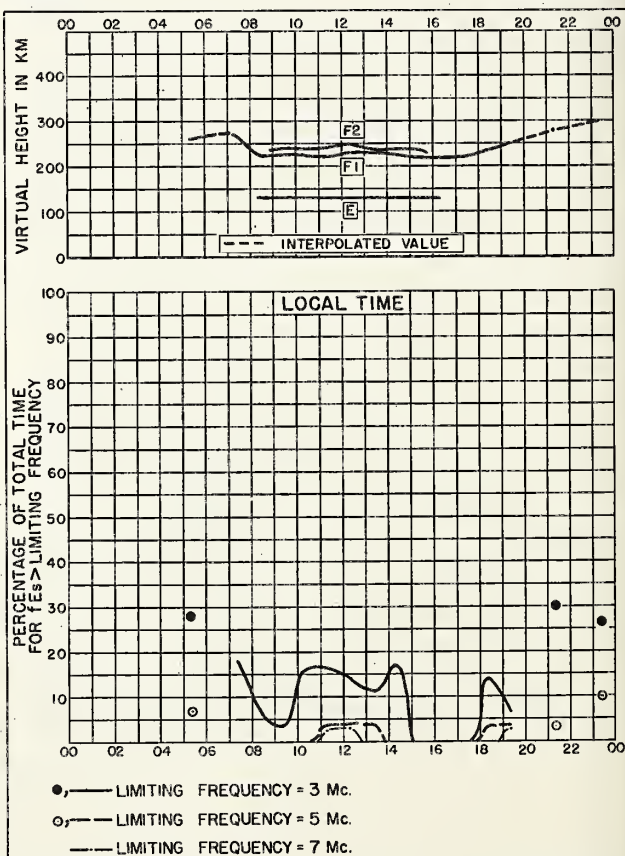


Fig. 120. CAMPBELL I.

JUNE 1951

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